SEQUENCE LISTING

<110> Ruvkun, Gary
      Ogg, Scott

<120> THERAPEUTIC AND DIAGNOSTIC TOOLS FOR
      IMPAIRED GLUCOSE TOLERANCE CONDITIONS

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<140> 09/205,658
<141> 1998-12-03

<150> 08/857,076
<151> 1997-05-15

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Pro Trp Asp Ile Lys Pro Gln Trp Ser Lys Leu Gly Asp Pro Asn Glu
            35                  40                  45
Lys Asp Leu Ala Gly Gln Arg Met Val Asn Cys Thr Val Val Glu Gly
    50                  55                  60
Ser Leu Thr Ile Ser Phe Val Leu Lys His Lys Thr Lys Ala Gln Glu
65                  70                  75                  80
Glu Met His Arg Ser Leu Gln Pro Arg Tyr Ser Gln Asp Glu Phe Ile
                85                  90                  95
Thr Phe Pro His Leu Arg Glu Ile Thr Gly Thr Leu Leu Val Phe Glu
            100                 105                 110
Thr Glu Gly Leu Val Asp Leu Arg Lys Ile Phe Pro Asn Leu Arg Val
            115                 120                 125
Ile Gly Gly Arg Ser Leu Ile Gln His Tyr Ala Leu Ile Ile Tyr Arg
            130                 135                 140
Asn Pro Asp Leu Glu Ile Gly Leu Asp Lys Leu Ser Val Ile Arg Asn
145                 150                 155                 160
Gly Gly Val Arg Ile Ile Asp Asn Arg Lys Leu Cys Tyr Thr Lys Thr
                165                 170                 175
Ile Asp Trp Lys His Leu Ile Thr Ser Ser Ile Asn Asp Val Val Val
            180                 185                 190
Asp Asn Ala Ala Glu Tyr Ala Val Thr Glu Thr Gly Leu Met Cys Pro
            195                 200                 205
Arg Gly Ala Cys Glu Glu Asp Lys Gly Glu Ser Lys Cys His Tyr Leu
    210                 215                 220
Glu Glu Lys Asn Gln Glu Gln Gly Val Glu Arg Val Gln Ser Cys Trp
225                 230                 235                 240
Ser Asn Thr Thr Cys Gln Lys Ser Cys Ala Tyr Asp Arg Leu Leu Pro
                245                 250                 255
Thr Lys Glu Ile Gly Pro Gly Cys Asp Ala Asn Gly Asp Arg Cys His
            260                 265                 270
Asp Gln Cys Val Gly Gly Cys Glu Arg Val Asn Asp Ala Thr Ala Cys
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His Ala Cys Lys Asn Val Tyr His Lys Gly Lys Cys Ile Glu Lys Cys
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Asp Ala His Leu Tyr Leu Leu Leu Gln Arg Arg Cys Val Thr Arg Glu
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Lys Ala Thr Ala Gly Leu Cys Ser Asp Lys Cys Pro Asp Gly Tyr Gln
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Ile Asn Pro Asp Asp His Arg Glu Cys Arg Lys Cys Val Gly Lys Cys
        355                     360                     365
Glu Ile Val Cys Glu Ile Asn His Val Ile Asp Thr Phe Pro Lys Ala
    370                     375                     380
Gln Ala Ile Arg Leu Cys Asn Ile Ile Asp Gly Asn Leu Thr Ile Glu
385                     390                     395                     400
Ile Arg Gly Lys Gln Asp Ser Gly Met Ala Ser Glu Leu Lys Asp Ile
        405                     410                     415
Phe Ala Asn Ile His Thr Ile Thr Gly Tyr Leu Leu Val Arg Gln Ser
        420                     425                     430
Ser Pro Phe Ile Ser Leu Asn Met Phe Arg Asn Leu Arg Arg Ile Glu
        435                     440                     445
Ala Lys Ser Leu Phe Arg Asn Leu Tyr Ala Ile Thr Val Phe Glu Asn
    450                     455                     460
Pro Asn Leu Lys Lys Leu Phe Asp Ser Thr Thr Asp Leu Thr Leu Asp
465                     470                     475                     480
Arg Gly Thr Val Ser Ile Ala Asn Asn Lys Met Leu Cys Phe Lys Tyr
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Ile Lys Gln Leu Met Ser Lys Leu Asn Ile Pro Leu Asp Pro Ile Asp
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Gln Ser Glu Gly Thr Asn Gly Glu Lys Ala Ile Cys Glu Asp Met Ala
        515                     520                     525
Ile Asn Val Ser Ile Thr Ala Val Asn Ala Asp Ser Val Phe Phe Ser
    530                     535                     540
Trp Pro Ser Phe Asn Ile Thr Asp Ile Asp Gln Arg Lys Phe Leu Gly
545                     550                     555                     560
Tyr Glu Leu Phe Phe Lys Glu Val Pro Arg Ile Asp Glu Asn Met Thr
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Ile Glu Glu Asp Arg Ser Ala Cys Val Asp Ser Trp Gln Ser Val Phe
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Lys Gln Tyr Tyr Glu Thr Ser Asn Gly Glu Pro Thr Pro Asp Ile Phe
        595                     600                     605
Met Asp Ile Gly Pro Arg Glu Arg Ile Arg Pro Asn Thr Leu Tyr Ala
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Tyr Tyr Val Ala Thr Gln Met Val Leu His Ala Gly Ala Lys Asn Gly
625                     630                     635                     640
Val Ser Lys Ile Gly Phe Val Arg Thr Ser Tyr Tyr Thr Pro Asp Pro
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Pro Thr Leu Ala Leu Ala Gln Val Asp Ser Asp Ala Ile His Ile Thr
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Cys Thr Asp Ala Ser Thr Pro Ala Asn Arg Gln Arg Thr Lys Asp Pro
705                     710                     715                     720
Lys Glu Thr Ile Val Ala Asp Lys Pro Val Asp Ile Pro Ser Ser Arg
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Thr Val Ala Pro Thr Leu Leu Thr Met Met Gly His Glu Asp Gln Gln
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Lys Thr Cys Ala Ala Thr Pro Gly Cys Cys Ser Cys Ser Ala Ile Glu
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Val Ser Glu Glu Leu Glu Lys Ala Glu Asn Leu Gly Lys Ala Pro Lys
            820                 825                 830
Thr Leu Gly Gly Lys Lys Pro Leu Ile His Ile Ser Lys Lys Lys Pro
            835                 840                 845
Ser Ser Ser Ser Thr Thr Ser Thr Pro Ala Pro Thr Ile Ala Ser Met
    850                 855                 860
Tyr Ala Leu Thr Arg Lys Pro Thr Thr Val Pro Gly Thr Arg Ile Arg
865                 870                 875                 880
Leu Tyr Glu Ile Tyr Glu Pro Leu Pro Gly Ser Trp Ala Ile Asn Val
                885                 890                 895
Ser Ala Leu Ala Leu Asp Asn Ser Tyr Val Ile Arg Asn Leu Lys His
            900                 905                 910
Tyr Thr Leu Tyr Ala Ile Ser Leu Ser Ala Cys Gln Asn Met Thr Val
            915                 920                 925
Pro Gly Ala Ser Cys Ser Ile Ser His Arg Ala Gly Ala Leu Lys Arg
    930                 935                 940
Thr Lys His Ile Thr Asp Ile Asp Lys Val Leu Asn Glu Thr Ile Glu
945                 950                 955                 960
Trp Arg Phe Met Asn Asn Ser Gln Gln Val Asn Val Thr Trp Asp Pro
                965                 970                 975
Pro Thr Glu Val Asn Gly Gly Ile Phe Gly Tyr Val Val Lys Leu Lys
            980                 985                 990
Ser Lys Val Asp Gly Ser Ile Val Met Thr Arg Cys Val Gly Ala Lys
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Arg Gly Tyr Ser Thr Arg Asn Gln Gly Val Leu Phe Gln Asn Leu Ala
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Asp Gly Arg Tyr Phe Val Ser Val Thr Ala Thr Ser Val His Gly Ala
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Gly Pro Glu Ala Glu Ser Ser Asp Pro Ile Val Val Met Thr Pro Gly
                1045                1050                1055
Phe Phe Thr Val Glu Ile Ile Leu Gly Met Leu Leu Val Phe Leu Ile
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Leu Met Ser Ile Ala Gly Cys Ile Ile Tyr Tyr Tyr Ile Gln Val Arg
            1075                1080                1085
Tyr Gly Lys Lys Val Lys Ala Leu Ser Asp Phe Met Gln Leu Asn Pro
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Glu Tyr Cys Val Asp Asn Lys Tyr Asn Ala Asp Asp Trp Glu Leu Arg
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Gln Asp Asp Val Val Leu Gly Gln Gln Cys Gly Glu Gly Ser Phe Gly
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Lys Val Tyr Leu Gly Thr Gly Asn Asn Val Val Ser Leu Met Gly Asp
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Arg Phe Gly Pro Cys Ala Ile Lys Ile Asn Val Asp Asp Pro Ala Ser
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Thr Glu Asn Leu Asn Tyr Leu Met Glu Ala Asn Ile Met Lys Asn Phe
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Lys Thr Asn Phe Ile Val Gln Leu Tyr Gly Val Ile Ser Thr Val Gln
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Pro Ala Met Val Val Met Glu Met Met Asp Leu Gly Asn Leu Arg Asp
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Tyr Leu Arg Ser Lys Arg Glu Asp Glu Val Phe Asn Glu Thr Asp Cys
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Gln Ile Cys Asp Gly Met Ala Tyr Leu Glu Ser Leu Lys Phe Cys His
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Tyr Lys Pro Ser Gly Lys Arg Met Met Pro Val Arg Trp Met Ser Pro
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Glu Ser Leu Lys Asp Gly Lys Phe Asp Ser Lys Ser Asp Val Trp Ser
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Phe Gly Val Val Leu Tyr Glu Met Val Thr Leu Gly Ala Gln Pro Tyr
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Ile Gly Leu Ser Asn Asp Glu Val Leu Asn Tyr Ile Gly Met Ala Arg
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Lys Val Ile Lys Lys Pro Glu Cys Cys Glu Asn Tyr Trp Tyr Lys Val
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Met Lys Met Cys Trp Arg Tyr Ser Pro Arg Asp Arg Pro Thr Phe Leu
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Gln Leu Val His Leu Leu Ala Ala Glu Ala Ser Pro Glu Phe Arg Asp
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His Leu Asn Asp Asp Asp Tyr Val Glu Lys Glu Ile Ser Ser Met Asp
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Gly His Leu Gln Ser Thr Arg Gly Gly Gln Asp Gly Asp Tyr Ile Glu
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Thr Glu Pro Lys Asn Tyr Arg Asn Asn Gly Ser Pro Ser Arg Asn Gly
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Asn Ser Arg Asp Ile Phe Asn Gly Arg Ser Ala Phe Gly Glu Asn Glu
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<213> Caenorhabditis elegans

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            20                  25                  30
Asn Val Ser Arg Gly Asp Tyr Arg Gly Glu Ala Val Ala Val Lys Val
            35                  40                  45
Phe Asn Ala Leu Asp Glu Pro Ala Phe His Lys Glu Thr Glu Ile Phe
    50                  55                  60
Glu Thr Arg Met Leu Arg His Pro Asn Val Leu Arg Tyr Ile Gly Ser
65                  70                  75                  80
Asp Arg Val Asp Thr Gly Phe Val Thr Glu Leu Trp Leu Val Thr Glu
            85                  90                  95
Tyr His Pro Ser Gly Ser Leu His Asp Phe Leu Leu Glu Asn Thr Val
            100                 105                 110
Asn Ile Glu Thr Tyr Tyr Asn Leu Met Arg Ser Thr Ala Ser Gly Leu
            115                 120                 125
Ala Phe Leu His Asn Gln Ile Gly Gly Ser Lys
    130                 135
```

<210> 14
<211> 62
<212> PRT
<213> Caenorhabditis elegans

<400> 14
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Glu Asp Ala Ala Ser Asp Ile Ile Ala Asn Glu Asn Tyr Lys Cys Gly
1               5                   10                  15
Thr Val Arg Tyr Leu Ala Pro Glu Ile Leu Asn Ser Thr Met Gln Phe
            20                  25                  30
Thr Val Phe Glu Ser Tyr Gln Cys Ala Asp Val Tyr Ser Phe Ser Leu
            35                  40                  45
Val Met Trp Glu Thr Leu Cys Arg Cys Glu Asp Gly Asp Val
    50                  55                  60
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<210> 15
<211> 31
<212> PRT
<213> Caenorhabditis elegans

<400> 15
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Lys Pro Ala Met Ala His Arg Asp Ile Lys Ser Lys Asn Ile Met Val
1               5                   10                  15
Lys Asn Asp Leu Thr Cys Ala Ile Gly Asp Leu Gly Leu Ser Leu
            20                  25                  30
```

<210> 16
<211> 72
<212> PRT
<213> Caenorhabditis elegans·

```
<400> 16
Ile Pro Tyr Ile Glu Trp Thr Asp Arg Asp Pro Gln Asp Ala Gln Met
1               5                   10                  15
Phe Asp Val Val Cys Thr Arg Arg Leu Arg Pro Thr Glu Asn Pro Leu
            20                  25                  30
Trp Lys Asp His Pro Glu Met Lys His Ile Met Glu Ile Ile Lys Thr
            35                  40                  45
Cys Trp Asn Gly Asn Pro Ser Ala Arg Phe Thr Ser Tyr Ile Cys Arg
            50                  55                  60
Lys Arg Met Asp Glu Arg Gln Gln
65                  70


<210> 17
<211> 150
<212> PRT
<213> Caenorhabditis elegans

<400> 17
Tyr Phe Glu Ser Val Asp Arg Phe Leu Tyr Ser Cys Val Gly Tyr Ser
1               5                   10                  15
Val Ala Thr Tyr Ile Met Gly Ile Lys Asp Arg His Ser Asp Asn Leu
            20                  25                  30
Met Leu Thr Glu Asp Gly Lys Tyr Val His Ile Asp Phe Gly His Ile
            35                  40                  45
Leu Gly His Gly Lys Thr Lys Leu Gly Ile Gln Arg Asp Arg Gln Pro
            50                  55                  60
Phe Ile Leu Thr Glu His Phe Met Thr Val Ile Arg Ser Gly Lys Ser
65                  70                  75                  80
Val Asp Gly Asn Ser His Glu Leu Gln Lys Phe Lys Thr Leu Cys Val
                85                  90                  95
Glu Ala Tyr Glu Val Met Trp Asn Asn Arg Asp Leu Phe Val Ser Leu
            100                 105                 110
Phe Thr Leu Met Leu Gly Met Glu Leu Pro Glu Leu Ser Thr Lys Ala
            115                 120                 125
Asp Leu Asp His Leu Lys Lys Thr Leu Phe Cys Asn Gly Glu Ser Lys
            130                 135                 140
Glu Glu Ala Arg Lys Phe
145                 150


<210> 18
<211> 113
<212> PRT
<213> Caenorhabditis elegans

<400> 18
Ser Pro Leu Asp Pro Val Tyr Lys Leu Gly Glu Met Ile Ile Asp Lys
1               5                   10                  15
Ala Ile Val Leu Gly Ser Ala Lys Arg Pro Leu Met Leu His Trp Lys
            20                  25                  30
Asn Lys Asn Pro Lys Ser Asp Leu His Leu Pro Phe Cys Ala Met Ile
            35                  40                  45
Phe Lys Asn Gly Asp Asp Leu Arg Gln Asp Met Leu Val Leu Gln Val
            50                  55                  60
Leu Glu Val Met Asp Asn Ile Trp Lys Ala Ala Asn Ile Asp Cys Cys
65                  70                  75                  80
Leu Asn Pro Tyr Ala Val Leu Pro Met Gly Glu Met Ile Gly Ile Ile
                85                  90                  95
```

```
Glu Val Val Pro Asn Cys Lys Thr Ile Phe Glu Ile Gln Val Gly Thr
            100                 105                 110
Gly


<210> 19
<211> 106
<212> PRT
<213> Caenorhabditis elegans

<400> 19
Leu Ala Phe Val Trp Thr Asp Arg Glu Asn Phe Ser Glu Leu Tyr Val
 1               5                  10                  15
Met Leu Glu Lys Trp Lys Pro Pro Ser Val Ala Ala Ala Leu Thr Leu
            20                  25                  30
Leu Gly Lys Arg Cys Thr Asp Arg Val Ile Arg Lys Phe Ala Val Glu
            35                  40                  45
Lys Leu Asn Glu Gln Leu Ser Pro Val Thr Phe His Leu Phe Ile Leu
            50                  55                  60
Pro Leu Ile Gln Ala Leu Lys Tyr Glu Pro Arg Ala Gln Ser Glu Val
65                  70                  75                  80
Gly Met Met Leu Leu Thr Arg Ala Leu Cys Asp Tyr Arg Ile Gly His
            85                  90                  95
Arg Leu Phe Trp Leu Leu Arg Ala Glu Ile
            100                 105


<210> 20
<211> 139
<212> PRT
<213> Caenorhabditis elegans

<400> 20
Glu Tyr Trp Ile Val Thr Glu Phe His Glu Arg Leu Ser Leu Tyr Glu
 1               5                  10                  15
Leu Leu Lys Asn Asn Val Ile Ser Ile Thr Ser Ala Asn Arg Ile Ile
            20                  25                  30
Met Ser Met Ile Asp Gly Leu Gln Phe Leu His Asp Asp Arg Pro Tyr
            35                  40                  45
Phe Phe Gly His Pro Lys Lys Pro Ile Ile His Arg Asp Ile Lys Ser
            50                  55                  60
Lys Asn Ile Leu Val Lys Ser Asp Met Thr Thr Cys Ile Ala Asp Phe
65                  70                  75                  80
Gly Leu Ala Arg Ile Tyr Ser Tyr Asp Ile Glu Gln Ser Asp Leu Leu
            85                  90                  95
Gly Gln Val Gly Thr Lys Arg Tyr Met Ser Pro Glu Met Leu Glu Gly
            100                 105                 110
Ala Thr Glu Phe Thr Pro Thr Ala Phe Lys Ala Met Asp Val Tyr Ser
            115                 120                 125
Met Gly Leu Val Met Trp Glu Val Ile Ser Arg
            130                 135


<210> 21
<211> 61
<212> PRT
<213> Caenorhabditis elegans
```

<400> 21
Ile Gly Phe Asp Pro Thr Ile Gly Arg Met Arg Asn Tyr Val Val Ser
1   5   10   15
Lys Lys Glu Arg Pro Gln Trp Arg Asp Glu Ile Ile Lys His Glu Tyr
            20   25   30
Met Ser Leu Leu Lys Lys Val Thr Glu Glu Met Trp Asp Pro Glu Ala
            35   40   45
Cys Ala Arg Ile Thr Ala Gly Cys Ala Phe Ala Arg Val
        50   55   60

<210> 22
<211> 20
<212> PRT
<213> Caenorhabditis elegans

<400> 22
Pro Ile Thr Asp Phe Gln Leu Ile Ser Lys Gly Arg Phe Gly Lys Val
1   5   10   15
Phe Lys Ala Gln
                20

<210> 23
<211> 163
<212> PRT
<213> Caenorhabditis elegans

<400> 23
Thr Asp Ser Glu Thr Arg Ser Arg Phe Ser Leu Gly Trp Tyr Asn Asn
1   5   10   15
Pro Asn Arg Ser Pro Gln Thr Ala Glu Val Arg Gly Leu Ile Gly Lys
            20   25   30
Gly Val Arg Phe Tyr Leu Leu Ala Gly Glu Val Tyr Val Glu Asn Leu
            35   40   45
Cys Asn Ile Pro Val Phe Val Gln Ser Ile Gly Ala Asn Met Lys Asn
        50   55   60
Gly Phe Gln Leu Asn Thr Val Ser Lys Leu Pro Pro Thr Gly Thr Met
65   70   75   80
Lys Val Phe Asp Met Arg Leu Phe Ser Lys Gln Leu Arg Thr Ala Ala
                85   90   95
Glu Lys Thr Tyr Gln Asp Val Tyr Cys Leu Ser Arg Met Cys Thr Val
            100   105   110
Arg Val Ser Phe Cys Lys Gly Trp Gly Glu His Tyr Arg Arg Ser Thr
            115   120   125
Val Leu Arg Ser Pro Val Trp Phe Gln Ala His Leu Asn Asn Pro Met
        130   135   140
His Trp Val Asp Ser Val Leu Thr Cys Met Gly Ala Pro Pro Arg Ile
145   150   155   160
Cys Ser Ser

<210> 24
<211> 44
<212> PRT
<213> Caenorhabditis elegans

<400> 24

Arg Ala Phe Arg Phe Pro Val Ile Arg Tyr Glu Ser Gln Val Lys Ser
1   5   10   15
Ile Leu Thr Cys Arg His Ala Phe Asn Ser His Ser Arg Asn Val Cys
            20   25   30
Leu Asn Pro Tyr His Tyr Arg Trp Val Glu Leu Pro
        35   40

<210> 25
<211> 38
<212> PRT
<213> Caenorhabditis elegans

<400> 25
Val Glu Tyr Glu Glu Ser Pro Ser Trp Leu Lys Leu Ile Tyr Tyr Glu
1   5   10   15
Glu Gly Thr Met Ile Gly Glu Lys Ala Asp Val Glu Gly His His Cys
            20   25   30
Leu Ile Asp Gly Phe Thr
        35

<210> 26
<211> 60
<212> PRT
<213> Caenorhabditis elegans

<400> 26
Asn Leu Ala Glu Thr Gly His Ser Lys Ile Met Arg Ala Ala His Lys
1   5   10   15
Val Ser Asn Pro Glu Ile Gly Tyr Cys Cys His Pro Thr Glu Tyr Asp
            20   25   30
Tyr Ile Lys Leu Ile Tyr Val Asn Arg Asp Gly Arg Val Ser Ile Ala
            35   40   45
Asn Val Asn Gly Met Ile Ala Lys Lys Cys Gly Cys
    50   55   60

<210> 27
<211> 20
<212> PRT
<213> Caenorhabditis elegans

<400> 27
Asp Trp Ile Val Ala Pro Pro Arg Tyr Asn Ala Tyr Met Cys Arg Gly
1   5   10   15
Asp Cys His Tyr
            20

<210> 28
<211> 43
<212> PRT
<213> Caenorhabditis elegans

<400> 28
Val Cys Asn Ala Glu Ala Gln Ser Lys Gly Cys Cys Leu Tyr Asp Leu
1   5   10   15
Glu Ile Glu Phe Glu Lys Ile Gly Trp Asp Trp Ile Val Ala Pro Pro

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                20                      25                         30
Arg Tyr Asn Ala Tyr Met Cys Arg Gly Asp Cys
        35                      40


<210> 29
<211> 70
<212> PRT
<213> Caenorhabditis elegans

<400> 29
Asp Cys His Tyr Asn Ala His His Phe Asn Leu Ala Glu Thr Gly His
 1               5                   10                  15
Ser Lys Ile Met Arg Ala Ala His Lys Val Ser Asn Pro Glu Ile Gly
            20                      25                  30
Tyr Cys Cys His Pro Thr Glu Tyr Asp Tyr Ile Lys Leu Ile Tyr Val
        35                      40                  45
Asn Arg Asp Gly Arg Val Ser Ile Ala Asn Val Asn Gly Met Ile Ala
    50                      55                  60
Lys Lys Cys Gly Cys Ser
65                  70


<210> 30
<211> 35
<212> PRT
<213> Caenorhabditis elegans

<400> 30
Cys Cys Leu Tyr Asp Leu Glu Ile Glu Phe Glu Lys Ile Gly Trp Asp
 1               5                   10                  15
Trp Ile Val Ala Pro Pro Arg Tyr Asn Ala Tyr Met Cys Arg Gly Asp
            20                      25                  30
Cys His Tyr
        35


<210> 31
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Degenerate probe

<221> misc_feature
<222> (1)...(23)
<223> n = A,T,C or G

<400> 31
ggntgggayt rnrtnrtngc ncc                                              23

<210> 32
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Degenerate probe
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<221> misc_feature
<222> (1)...(18)
<223> n = A,T,C or G

<400> 32
tgytgynnnc cnacngar   18

<210> 33
<211> 127
<212> PRT
<213> Caenorhabditis elegans

<400> 33
Lys Phe His Glu Trp Ala Ala Gln Ile Cys Asp Gly Met Ala Tyr Leu
1   5   10   15
Glu Ser Leu Lys Phe Cys His Arg Asp Leu Ala Ala Arg Asn Cys Met
            20   25   30
Ile Asn Arg Asp Glu Thr Val Lys Ile Gly Asp Phe Gly Met Ala Arg
        35   40   45
Asp Leu Phe Tyr His Asp Tyr Tyr Lys Pro Ser Gly Lys Arg Met Met
    50   55   60
Pro Val Arg Trp Met Ser Pro Glu Ser Leu Lys Asp Gly Lys Phe Asp
65   70   75   80
Ser Lys Ser Asp Val Trp Ser Phe Gly Val Val Leu Tyr Glu Met Val
                85   90   95
Thr Leu Gly Ala Gln Pro Tyr Ile Gly Leu Ser Asn Asp Glu Val Leu
            100   105   110
Asn Tyr Ile Gly Met Ala Arg Lys Val Ile Lys Lys Pro Glu Cys
        115   120   125

<210> 34
<211> 131
<212> PRT
<213> Caenorhabditis elegans

<400> 34
Asn Thr Thr Cys Gln Lys Ser Cys Ala Tyr Asp Arg Leu Leu Pro Thr
1   5   10   15
Lys Glu Ile Gly Pro Gly Cys Asp Ala Asn Gly Asp Arg Cys His Asp
            20   25   30
Gln Cys Val Gly Gly Cys Glu Arg Val Asn Asp Ala Thr Ala Cys His
        35   40   45
Ala Cys Lys Asn Val Tyr His Lys Gly Lys Cys Ile Glu Lys Cys Asp
    50   55   60
Ala His Leu Tyr Leu Leu Leu Gln Arg Arg Cys Val Thr Arg Glu Gln
65   70   75   80
Cys Leu Gln Leu Asn Pro Val Leu Ser Asn Lys Thr Val Pro Ile Lys
                85   90   95
Ala Thr Ala Gly Leu Cys Ser Asp Lys Cys Pro Asp Gly Tyr Gln Ile
            100   105   110
Asn Pro Asp Asp His Arg Glu Cys Arg Lys Cys Val Gly Lys Cys Glu
        115   120   125
Ile Val Cys
    130

<210> 35
<211> 103

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<212> PRT
<213> Caenorhabditis elegans

<400> 35
Phe Asp Gln Lys Ala Cys Glu Ser Leu Val Lys Lys Leu Lys Asp Lys
1   5   10   15
Lys Asn Asp Leu Gln Asn Leu Ile Asp Val Val Leu Ser Lys Gly Thr
            20   25   30
Lys Tyr Thr Gly Cys Ile Thr Ile Pro Arg Thr Leu Asp Gly Arg Leu
            35   40   45
Gln Val His Gly Arg Lys Gly Phe Pro His Val Val Tyr Gly Lys Leu
        50   55   60
Trp Arg Phe Asn Glu Met Thr Lys Asn Glu Thr Arg His Val Asp His
65   70   75   80
Cys Lys His Ala Phe Glu Met Lys Ser Asp Met Val Cys Val Asn Pro
                85   90   95
Tyr His Tyr Glu Ile Val Ile
                100

<210> 36
<211> 79
<212> PRT
<213> Caenorhabditis elegans

<400> 36
Asn Arg Tyr Ser Leu Gly Leu Glu Pro Asn Pro Ile Arg Glu Pro Val
1   5   10   15
Ala Phe Lys Val Arg Lys Ala Ile Val Asp Gly Ile Arg Phe Ser Tyr
            20   25   30
Lys Lys Asp Gly Ser Val Trp Leu Gln Asn Arg Met Lys Tyr Pro Val
            35   40   45
Phe Val Thr Ser Gly Tyr Leu Asp Glu Gln Ser Gly Gly Leu Lys Lys
        50   55   60
Asp Lys Val His Lys Val Tyr Gly Cys Ala Ser Ile Lys Thr Phe
65   70   75

<210> 37
<211> 106
<212> PRT
<213> Caenorhabditis elegans

<400> 37
Lys Lys Thr Thr Thr Arg Arg Asn Ala Trp Gly Asn Met Ser Tyr Ala
1   5   10   15
Glu Leu Ile Thr Thr Ala Ile Met Ala Ser Pro Glu Lys Arg Leu Thr
            20   25   30
Leu Ala Gln Val Tyr Glu Trp Met Val Gln Asn Val Pro Tyr Phe Arg
            35   40   45
Asp Lys Gly Asp Ser Asn Ser Ser Ala Gly Trp Lys Asn Ser Ile Arg
        50   55   60
His Asn Leu Ser Leu His Ser Arg Phe Met Arg Ile Gln Asn Glu Gly
65   70   75   80
Ala Gly Lys Ser Ser Trp Trp Val Ile Asn Pro Asp Ala Lys Pro Gly
                85   90   95
Met Asn Pro Arg Arg Thr Arg Glu Arg Ser
                100   105

<210> 38
<211> 60
<212> PRT
<213> Caenorhabditis elegans

<400> 38
Glu Ile Lys Leu Ser Asp Phe Lys His Gln Leu Phe Glu Leu Ile Ala
1   5   10   15
Pro Met Lys Trp Gly Thr Tyr Ser Val Lys Pro Gln Asp Tyr Val Phe
            20   25   30
Arg Gln Leu Asn Asn Phe Gly Glu Ile Glu Val Ile Phe Asn Asp Asp
            35   40   45
Gln Pro Leu Ser Lys Leu Glu Leu His Gly Thr Phe
        50   55   60

<210> 39
<211> 2784
<212> DNA
<213> Caenorhabditis elegans

<400> 39
atgaagctaa tagcaacttc tcttctagtt cccgacgagc acacaccgat gatgtcacca   60
gtgaatacaa ctacaaagat tctacaacgg agtggtatta aaatggaaat cccgccatat   120
ttggatccag acagtcagga tgatgacccg gaagatggtg tcaactaccc ggatccagat   180
ttatttgaca caaaaaacac aaatatgacc gagtacgatt tggatgtgtt gaagcttgga   240
aaaccagcag tagatgaagc acggaaaaag atcgaagttc ccgacgctag tgcgccgcca   300
aacaaaattg tagaatattt gatgtattat agaacgttaa aagaaagtga actcatacaa   360
ctgaatgcgt atcggacaaa acgaaatcga ttatcgttga acttggtcaa aaacaatatt   420
gatcgagagt cgaccaaaa agcttgcgag tccctggtga aaaaattgaa ggataagaag   480
aatgatctcc agaacctgat tgatgtggtt ctttcaaaag gtacaaaata taccggttgc   540
attacaattc caaggacact tgatggccgg ttacaggtcc acggaagaaa aggtttccct   600
cacgtagtct atggcaaact gtggaggttt aatgaaatga caaaaaacga aacgcgtcat   660
gtggaccact gcaagcacgc atttgaaatg aaaagtgaca tggtatgcgt gaatccctat   720
cactacgaaa ttgtcattgg aactatgatt gttgggcaga gggatcatga caatcgagat   780
atgccgccgc cacatcaacg ctaccacact ccaggtcggc aggatccagt tgacgatatg   840
agtagattta taccaccagc ttccattcgt ccgcctccga tgaacatgca cacaaggcct   900
cagcctatgc ctcaacaatt gccttcagtt ggcgcaacgt ttgcccatcc tctcccacat   960
caggcgccac ataacccagg ggtttcacat ccgtactcca ttgctccaca gacccattac   1020
ccgttgaaca tgaacccaat tccgcaaatg ccgcaaatgc cacaaatgcc accacctctc   1080
catcagggat atggaatgaa tgggccgagt tgctcttcag aaaacaacaa tccattccac   1140
caaaatcacc attataatga tattagccat ccaaatcact attcctacga ctgtggtccg   1200
aacttgtacg ggtttccaac tccttatccg gattttcacc atcctttcaa tcagcaacca   1260
caccagccgc cacaactatc acaaaaccat acgtcccaac aaggcagtca tcaaccaggg   1320
caccaaggtc aggtaccgaa tgatccacca atttgaaac cagtgttaca accatcaaca   1380
gtcaccttgg acgtgttccg tcggtactgt agacagacat ttggaaatcg attttttgaa   1440
ggagaaagtg aacaatccgg cgcaataatt cggtctagta acaaattcat tgaagaattt   1500
gattcgccga tttgtggtgt gacagttgtt cgaccgcgga tgacagacgt tgaggttttg   1560
gagaacatca tgccggaaga tgcaccatat catgacattt gcaagttcat tttgaggctc   1620
acatcagaaa gtgtaacttt ctcaggagag gggccagaag ttagtgattt gaacgaaaaa   1680
tggggaacaa ttgtgtacta tgagaaaaat ttgcaaattg gcgagaaaaa atgttcgaga   1740
ggaaatttcc acgtggatgg cggattcatt tgctctgaga atcgttacag tctcggactt   1800
gagccaaatc caattagaga accagtggcg tttaaagttc gtaaagcaat agtggatgga   1860
attcgctttt cctacaaaaa agacgggagt gtttggcttc aaaaccgcat gaagtacccg   1920
gtatttgtca cttctgggta tctcgacgag caatcaggag gcctaaagaa ggataaagtg   1980
cacaaagttt acggatgtgc gtctatcaaa acgtttggct tcaacgtttc caaacaaatc   2040
atcagagacg cgcttctttc caagcaaatg gcaacaatgt acttgcaagg aaaaattgact   2100
ccgatgaatt atatctacga gaagaagact caggaagagc tgcgaaggga agcaacacgc   2160
accactgatt cattggccaa gtactgttgt gtccgtgtct cgttctgcaa aggatttgga   2220

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gaagcatacc cagaacgccc gtcaattcat gattgtccag tttggattga gttgaaaatc   2280
aacattgcct acgatttcat ggattcaatc tgccagtaca taaccaactg cttcgagccg   2340
ctaggaatgg aagattttgc aaaattggga atcaacgtca gtgatgacta aatgataact   2400
ttttcactc accctactag atactgattt agtcttattc caaatcatcc aacgatatca   2460
aacttttcc tttgaacttt gcatactatg ttatcacaag ttccaagcag tttcaataca   2520
aacataggat atgttaacaa cttttgataa gaatcaagtt accaactgtt cattgtgagc   2580
tttgagctgt atagaaggac aatgtatccc acctcaat ctttaatagt catcagtcac   2640
tggtcccgca ccaattttt cgattcgcat atgtcatata ttgcaccgtg cccttttta   2700
ttgtaacttt taatatattt tcttcccaac ttgtgaatat gattgatgaa ccaccatttt   2760
gagtaataaa tgtatttttt gtgg                                         2784
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<210> 40
<211> 796
<212> PRT
<213> Caenorhabditis elegans

<400> 40
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Met Lys Leu Ile Ala Thr Ser Leu Leu Val Pro Asp Glu His Thr Pro
  1               5                  10                  15
Met Met Ser Pro Val Asn Thr Thr Thr Lys Ile Leu Gln Arg Ser Gly
             20                  25                  30
Ile Lys Met Glu Ile Pro Pro Tyr Leu Asp Pro Asp Ser Gln Asp Asp
         35                  40                  45
Asp Pro Glu Asp Gly Val Asn Tyr Pro Asp Pro Asp Leu Phe Asp Thr
     50                  55                  60
Lys Asn Thr Asn Met Thr Glu Tyr Asp Leu Asp Val Leu Lys Leu Gly
 65                  70                  75                  80
Lys Pro Ala Val Asp Glu Ala Arg Lys Lys Ile Glu Val Pro Asp Ala
                 85                  90                  95
Ser Ala Pro Pro Asn Lys Ile Val Glu Tyr Leu Met Tyr Tyr Arg Thr
            100                 105                 110
Leu Lys Glu Ser Glu Leu Ile Gln Leu Asn Ala Tyr Arg Thr Lys Arg
        115                 120                 125
Asn Arg Leu Ser Leu Asn Leu Val Lys Asn Asn Ile Asp Arg Glu Phe
        130                 135                 140
Asp Gln Lys Ala Cys Glu Ser Leu Val Lys Lys Leu Lys Asp Lys Lys
145                 150                 155                 160
Asn Asp Leu Gln Asn Leu Ile Asp Val Val Leu Ser Lys Gly Thr Lys
                165                 170                 175
Tyr Thr Gly Cys Ile Thr Ile Pro Arg Thr Leu Asp Gly Arg Leu Gln
            180                 185                 190
Val His Gly Arg Lys Gly Phe Pro His Val Val Tyr Gly Lys Leu Trp
        195                 200                 205
Arg Phe Asn Glu Met Thr Lys Asn Glu Thr Arg His Val Asp His Cys
        210                 215                 220
Lys His Ala Phe Glu Met Lys Ser Asp Met Val Cys Val Asn Pro Tyr
225                 230                 235                 240
His Tyr Glu Ile Val Ile Gly Thr Met Ile Val Gly Gln Arg Asp His
                245                 250                 255
Asp Asn Arg Asp Met Pro Pro Pro His Gln Arg Tyr His Thr Pro Gly
            260                 265                 270
Arg Gln Asp Pro Val Asp Asp Met Ser Arg Phe Ile Pro Pro Ala Ser
        275                 280                 285
Ile Arg Pro Pro Pro Met Asn Met His Thr Arg Pro Gln Pro Met Pro
        290                 295                 300
Gln Gln Leu Pro Ser Val Gly Ala Thr Phe Ala His Pro Leu Pro His
305                 310                 315                 320
Gln Ala Pro His Asn Pro Gly Val Ser His Pro Tyr Ser Ile Ala Pro
                325                 330                 335
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Gln Thr His Tyr Pro Leu Asn Met Asn Pro Ile Pro Gln Met Pro Gln
            340                 345                 350
Met Pro Gln Met Pro Pro Pro Leu His Gln Gly Tyr Gly Met Asn Gly
            355                 360                 365
Pro Ser Cys Ser Ser Glu Asn Asn Asn Pro Phe His Gln Asn His His
        370                 375                 380
Tyr Asn Asp Ile Ser His Pro Asn His Tyr Ser Tyr Asp Cys Gly Pro
385                 390                 395                 400
Asn Leu Tyr Gly Phe Pro Thr Pro Tyr Pro Asp Phe His His Pro Phe
                405                 410                 415
Asn Gln Gln Pro His Gln Pro Pro Gln Leu Ser Gln Asn His Thr Ser
            420                 425                 430
Gln Gln Gly Ser His Gln Pro Gly His Gln Gly Gln Val Pro Asn Asp
            435                 440                 445
Pro Pro Ile Ser Arg Pro Val Leu Gln Pro Ser Thr Val Thr Leu Asp
    450                 455                 460
Val Phe Arg Arg Tyr Cys Arg Gln Thr Phe Gly Asn Arg Phe Phe Glu
465                 470                 475                 480
Gly Glu Ser Glu Gln Ser Gly Ala Ile Ile Arg Ser Ser Asn Lys Phe
            485                 490                 495
Ile Glu Glu Phe Asp Ser Pro Ile Cys Gly Val Thr Val Val Arg Pro
            500                 505                 510
Arg Met Thr Asp Gly Glu Val Leu Glu Asn Ile Met Pro Glu Asp Ala
            515                 520                 525
Pro Tyr His Asp Ile Cys Lys Phe Ile Leu Arg Leu Thr Ser Glu Ser
    530                 535                 540
Val Thr Phe Ser Gly Glu Gly Pro Glu Val Ser Asp Leu Asn Glu Lys
545                 550                 555                 560
Trp Gly Thr Ile Val Tyr Tyr Glu Lys Asn Leu Gln Ile Gly Glu Lys
                565                 570                 575
Lys Cys Ser Arg Gly Asn Phe His Val Asp Gly Gly Phe Ile Cys Ser
            580                 585                 590
Glu Asn Arg Tyr Ser Leu Gly Leu Glu Pro Asn Pro Ile Arg Glu Pro
        595                 600                 605
Val Ala Phe Lys Val Arg Lys Ala Ile Val Asp Gly Ile Arg Phe Ser
    610                 615                 620
Tyr Lys Lys Asp Gly Ser Val Trp Leu Gln Asn Arg Met Lys Tyr Pro
625                 630                 635                 640
Val Phe Val Thr Ser Gly Tyr Leu Asp Glu Gln Ser Gly Gly Leu Lys
                645                 650                 655
Lys Asp Lys Val His Lys Val Tyr Gly Cys Ala Ser Ile Lys Thr Phe
            660                 665                 670
Gly Phe Asn Val Ser Lys Gln Ile Ile Arg Asp Ala Leu Leu Ser Lys
        675                 680                 685
Gln Met Ala Thr Met Tyr Leu Gln Gly Lys Leu Thr Pro Met Asn Tyr
        690                 695                 700
Ile Tyr Glu Lys Lys Thr Gln Glu Glu Leu Arg Arg Glu Ala Thr Arg
705                 710                 715                 720
Thr Thr Asp Ser Leu Ala Lys Tyr Cys Cys Val Arg Val Ser Phe Cys
                725                 730                 735
Lys Gly Phe Gly Glu Ala Tyr Pro Glu Arg Pro Ser Ile His Asp Cys
            740                 745                 750
Pro Val Trp Ile Glu Leu Lys Ile Asn Ile Ala Tyr Asp Phe Met Asp
        755                 760                 765
Ser Ile Cys Gln Tyr Ile Thr Asn Cys Phe Glu Pro Leu Gly Met Glu
    770                 775                 780
Asp Phe Ala Lys Leu Gly Ile Asn Val Ser Asp Asp
785                 790                 795
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<210> 41
<211> 858
<212> PRT
<213> Caenorhabditis elegans

<400> 41
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Pro Gln Phe Asn Tyr Ser Gln Pro Gly Thr Ser Thr Gly Gly Pro Leu
                20   25   30
Tyr Gly Gly Lys Pro Ser His Gly Leu Glu Asp Ile Pro Asp Val Glu
            35   40   45
Glu Tyr Glu Arg Asn Leu Leu Gly Ala Gly Ala Gly Phe Asn Leu Leu
        50   55   60
Asn Val Gly Asn Met Ala Asn Val Pro Asp Glu His Thr Pro Met Met
65   70   75   80
Ser Pro Val Asn Thr Thr Thr Lys Ile Leu Gln Arg Ser Gly Ile Lys
                85   90   95
Met Glu Ile Pro Pro Tyr Leu Asp Pro Asp Ser Gln Asp Asp Asp Pro
            100   105   110
Glu Asp Gly Val Asn Tyr Pro Asp Pro Asp Leu Phe Asp Thr Lys Asn
        115   120   125
Thr Asn Met Thr Glu Tyr Asp Leu Asp Val Leu Lys Leu Gly Lys Pro
    130   135   140
Ala Val Asp Glu Ala Arg Lys Lys Ile Glu Val Pro Asp Ala Ser Ala
145   150   155   160
Pro Pro Asn Lys Ile Val Glu Tyr Leu Met Tyr Tyr Arg Thr Leu Lys
                165   170   175
Glu Ser Glu Leu Ile Gln Leu Asn Ala Tyr Arg Thr Lys Arg Asn Arg
            180   185   190
Leu Ser Leu Asn Leu Val Lys Asn Asn Ile Asp Arg Glu Phe Asp Gln
        195   200   205
Lys Ala Cys Glu Ser Leu Val Lys Lys Leu Lys Asp Lys Lys Asn Asp
    210   215   220
Leu Gln Asn Leu Ile Asp Val Val Leu Ser Lys Gly Thr Lys Tyr Thr
225   230   235   240
Gly Cys Ile Thr Ile Pro Arg Thr Leu Asp Gly Arg Leu Gln Val His
                245   250   255
Gly Arg Lys Gly Phe Pro His Val Val Tyr Gly Lys Leu Trp Arg Phe
            260   265   270
Asn Glu Met Thr Lys Asn Glu Thr Arg His Val Asp His Cys Lys His
        275   280   285
Ala Phe Glu Met Lys Ser Asp Met Val Cys Val Asn Pro Tyr His Tyr
    290   295   300
Glu Ile Val Ile Gly Thr Met Ile Val Gly Gln Arg Asp His Asp Asn
305   310   315   320
Arg Asp Met Pro Pro Pro His Gln Arg Tyr His Thr Pro Gly Arg Gln
                325   330   335
Asp Pro Val Asp Asp Met Ser Arg Phe Ile Pro Pro Ala Ser Ile Arg
            340   345   350
Pro Pro Pro Met Asn Met His Thr Arg Pro Gln Pro Met Pro Gln Gln
        355   360   365
Leu Pro Ser Val Gly Ala Thr Phe Ala His Pro Leu Pro His Gln Ala
    370   375   380
Pro His Asn Pro Gly Val Ser His Pro Tyr Ser Ile Ala Pro Gln Thr
385   390   395   400
His Tyr Pro Leu Asn Met Asn Pro Ile Pro Gln Met Pro Gln Met Pro
                405   410   415
Gln Met Pro Pro Pro Leu His Gln Gly Tyr Gly Met Asn Gly Pro Ser

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                   420                         425                         430
Cys Ser Ser Glu Asn Asn Asn Pro Phe His Gln Asn His His Tyr Asn
           435                     440                     445
Asp Ile Ser His Pro Asn His Tyr Ser Tyr Asp Cys Gly Pro Asn Leu
       450                     455                     460
Tyr Gly Phe Pro Thr Pro Tyr Pro Asp Phe His His Pro Phe Asn Gln
465                     470                     475                     480
Gln Pro His Gln Pro Pro Gln Leu Ser Gln Asn His Thr Ser Gln Gln
                   485                     490                     495
Gly Ser His Gln Pro Gly His Gln Gly Gln Val Pro Asn Asp Pro Pro
           500                     505                     510
Ile Ser Arg Pro Val Leu Gln Pro Ser Thr Val Thr Leu Asp Val Phe
           515                     520                     525
Arg Arg Tyr Cys Arg Gln Thr Phe Gly Asn Arg Phe Phe Glu Gly Glu
       530                     535                     540
Ser Glu Gln Ser Gly Ala Ile Ile Arg Ser Ser Asn Lys Phe Ile Glu
545                     550                     555                     560
Glu Phe Asp Ser Pro Ile Cys Gly Val Thr Val Val Arg Pro Arg Met
                   565                     570                     575
Thr Asp Gly Glu Val Leu Glu Asn Ile Met Pro Glu Asp Ala Pro Tyr
               580                     585                     590
His Asp Ile Cys Lys Phe Ile Leu Arg Leu Thr Ser Glu Ser Val Thr
           595                     600                     605
Phe Ser Gly Glu Gly Pro Glu Val Ser Asp Leu Asn Glu Lys Trp Gly
       610                     615                     620
Thr Ile Val Tyr Tyr Glu Lys Asn Leu Gln Ile Gly Glu Lys Lys Cys
625                     630                     635                     640
Ser Arg Gly Asn Phe His Val Asp Gly Gly Phe Ile Cys Ser Glu Asn
                   645                     650                     655
Arg Tyr Ser Leu Gly Leu Glu Pro Asn Pro Ile Arg Glu Pro Val Ala
               660                     665                     670
Phe Lys Val Arg Lys Ala Ile Val Asp Gly Ile Arg Phe Ser Tyr Lys
           675                     680                     685
Lys Asp Gly Ser Val Trp Leu Gln Asn Arg Met Lys Tyr Pro Val Phe
           690                     695                     700
Val Thr Ser Gly Tyr Leu Asp Glu Gln Ser Gly Gly Leu Lys Lys Asp
705                     710                     715                     720
Lys Val His Lys Val Tyr Gly Cys Ala Ser Ile Lys Thr Phe Gly Phe
                   725                     730                     735
Asn Val Ser Lys Gln Ile Ile Arg Asp Ala Leu Leu Ser Lys Gln Met
               740                     745                     750
Ala Thr Met Tyr Leu Gln Gly Lys Leu Thr Pro Met Asn Tyr Ile Tyr
           755                     760                     765
Glu Lys Lys Thr Gln Glu Glu Leu Arg Arg Glu Ala Thr Arg Thr Thr
       770                     775                     780
Asp Ser Leu Ala Lys Tyr Cys Cys Val Arg Val Ser Phe Cys Lys Gly
785                     790                     795                     800
Phe Gly Glu Ala Tyr Pro Glu Arg Pro Ser Ile His Asp Cys Pro Val
                   805                     810                     815
Trp Ile Glu Leu Lys Ile Asn Ile Ala Tyr Asp Phe Met Asp Ser Ile
           820                     825                     830
Cys Gln Tyr Ile Thr Asn Cys Phe Glu Pro Leu Gly Met Glu Asp Phe
           835                     840                     845
Ala Lys Leu Gly Ile Asn Val Ser Asp Asp
       850                     855
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<210> 42
<211> 892

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<212> PRT
<213> Caenorhabditis elegans

<400> 42
Met Gly Asp His His Asn Leu Thr Gly Leu Pro Gly Thr Ser Ile Pro
1   5   10   15
Pro Gln Phe Asn Tyr Ser Gln Pro Gly Thr Ser Thr Gly Gly Pro Leu
                20   25   30
Tyr Gly Gly Lys Pro Ser His Gly Leu Glu Asp Ile Pro Asp Val Glu
            35   40   45
Glu Tyr Glu Arg Asn Leu Leu Gly Ala Gly Ala Gly Phe Asn Leu Leu
        50   55   60
Asn Val Gly Asn Met Ala Asn Glu Phe Lys Pro Ile Ile Thr Leu Asp
65   70   75   80
Thr Lys Pro Pro Arg Asp Ala Asn Lys Ser Leu Ala Phe Asn Gly Gly
                85   90   95
Leu Lys Leu Ile Thr Pro Lys Thr Glu Val Pro Asp Glu His Thr Pro
            100   105   110
Met Met Ser Pro Val Asn Thr Thr Thr Lys Ile Leu Gln Arg Ser Gly
            115   120   125
Ile Lys Met Glu Ile Pro Pro Tyr Leu Asp Pro Asp Ser Gln Asp Asp
        130   135   140
Asp Pro Glu Asp Gly Val Asn Tyr Pro Asp Pro Asp Leu Phe Asp Thr
145   150   155   160
Lys Asn Thr Asn Met Thr Glu Tyr Asp Leu Asp Val Leu Lys Leu Gly
                165   170   175
Lys Pro Ala Val Asp Glu Ala Arg Lys Lys Ile Glu Val Pro Asp Ala
            180   185   190
Ser Ala Pro Pro Asn Lys Ile Val Glu Tyr Leu Met Tyr Tyr Arg Thr
            195   200   205
Leu Lys Glu Ser Glu Leu Ile Gln Leu Asn Ala Tyr Arg Thr Lys Arg
        210   215   220
Asn Arg Leu Ser Leu Asn Leu Val Lys Asn Asn Ile Asp Arg Glu Phe
225   230   235   240
Asp Gln Lys Ala Cys Glu Ser Leu Val Lys Lys Leu Lys Asp Lys Lys
                245   250   255
Asn Asp Leu Gln Asn Leu Ile Asp Val Val Leu Ser Lys Gly Thr Lys
            260   265   270
Tyr Thr Gly Cys Ile Thr Ile Pro Arg Thr Leu Asp Gly Arg Leu Gln
            275   280   285
Val His Gly Arg Lys Gly Phe Pro His Val Val Tyr Gly Lys Leu Trp
        290   295   300
Arg Phe Asn Glu Met Thr Lys Asn Glu Thr Arg His Val Asp His Cys
305   310   315   320
Lys His Ala Phe Glu Met Lys Ser Asp Met Val Cys Val Asn Pro Tyr
                325   330   335
His Tyr Glu Ile Val Ile Gly Thr Met Ile Val Gly Gln Arg Asp His
            340   345   350
Asp Asn Arg Asp Met Pro Pro Pro His Gln Arg Tyr His Thr Pro Gly
        355   360   365
Arg Gln Asp Pro Val Asp Asp Met Ser Arg Phe Ile Pro Pro Ala Ser
        370   375   380
Ile Arg Pro Pro Pro Met Asn Met His Thr Arg Pro Gln Pro Met Pro
385   390   395   400
Gln Gln Leu Pro Ser Val Gly Ala Thr Phe Ala His Pro Leu Pro His
                405   410   415
Gln Ala Pro His Asn Pro Gly Val Ser His Pro Tyr Ser Ile Ala Pro
            420   425   430
Gln Thr His Tyr Pro Leu Asn Met Asn Pro Ile Pro Gln Met Pro Gln

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                435                      440                      445
Met Pro Gln Met Pro Pro Pro Leu His Gln Gly Tyr Gly Met Asn Gly
    450                      455                      460
Pro Ser Cys Ser Ser Glu Asn Asn Asn Pro Phe His Gln Asn His His
465                      470                      475                      480
Tyr Asn Asp Ile Ser His Pro Asn His Tyr Ser Tyr Asp Cys Gly Pro
                485                      490                      495
Asn Leu Tyr Gly Phe Pro Thr Pro Tyr Pro Asp Phe His His Pro Phe
            500                      505                      510
Asn Gln Gln Pro His Gln Pro Pro Gln Leu Ser Gln Asn His Thr Ser
            515                      520                      525
Gln Gln Gly Ser His Gln Pro Gly His Gln Gly Gln Val Pro Asn Asp
        530                      535                      540
Pro Pro Ile Ser Arg Pro Val Leu Gln Pro Ser Thr Val Thr Leu Asp
545                      550                      555                      560
Val Phe Arg Arg Tyr Cys Arg Gln Thr Phe Gly Asn Arg Phe Phe Glu
                565                      570                      575
Gly Glu Ser Glu Gln Ser Gly Ala Ile Ile Arg Ser Ser Asn Lys Phe
            580                      585                      590
Ile Glu Glu Phe Asp Ser Pro Ile Cys Gly Val Thr Val Val Arg Pro
            595                      600                      605
Arg Met Thr Asp Gly Glu Val Leu Glu Asn Ile Met Pro Glu Asp Ala
    610                      615                      620
Pro Tyr His Asp Ile Cys Lys Phe Ile Leu Arg Leu Thr Ser Glu Ser
625                      630                      635                      640
Val Thr Phe Ser Gly Glu Gly Pro Glu Val Ser Asp Leu Asn Glu Lys
                645                      650                      655
Trp Gly Thr Ile Val Tyr Tyr Glu Lys Asn Leu Gln Ile Gly Glu Lys
            660                      665                      670
Lys Cys Ser Arg Gly Asn Phe His Val Asp Gly Gly Phe Ile Cys Ser
            675                      680                      685
Glu Asn Arg Tyr Ser Leu Gly Leu Glu Pro Asn Pro Ile Arg Glu Pro
        690                      695                      700
Val Ala Phe Lys Val Arg Lys Ala Ile Val Asp Gly Ile Arg Phe Ser
705                      710                      715                      720
Tyr Lys Lys Asp Gly Ser Val Trp Leu Gln Asn Arg Met Lys Tyr Pro
                725                      730                      735
Val Phe Val Thr Ser Gly Tyr Leu Asp Glu Gln Ser Gly Gly Leu Lys
            740                      745                      750
Lys Asp Lys Val His Lys Val Tyr Gly Cys Ala Ser Ile Lys Thr Phe
            755                      760                      765
Gly Phe Asn Val Ser Lys Gln Ile Ile Arg Asp Ala Leu Leu Ser Lys
        770                      775                      780
Gln Met Ala Thr Met Tyr Leu Gln Gly Lys Leu Thr Pro Met Asn Tyr
785                      790                      795                      800
Ile Tyr Glu Lys Lys Thr Gln Glu Glu Leu Arg Arg Glu Ala Thr Arg
                805                      810                      815
Thr Thr Asp Ser Leu Ala Lys Tyr Cys Cys Val Arg Val Ser Phe Cys
            820                      825                      830
Lys Gly Phe Gly Glu Ala Tyr Pro Glu Arg Pro Ser Ile His Asp Cys
            835                      840                      845
Pro Val Trp Ile Glu Leu Lys Ile Asn Ile Ala Tyr Asp Phe Met Asp
    850                      855                      860
Ser Ile Cys Gln Tyr Ile Thr Asn Cys Phe Glu Pro Leu Gly Met Glu
865                      870                      875                      880
Asp Phe Ala Lys Leu Gly Ile Asn Val Ser Asp Asp
            885                      890
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<210> 43
<211> 3499
<212> DNA
<213> Caenorhabditis elegans

<400> 43
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tcatcccctc ctcttactcc ttctttctcg tccgctacta ctgtatcttc tggacatcta     180
cctgtataca caccagtggc cagtcatctg ccattacaat ttcatcaatt gacacttctt     240
caacaacaac cgccgtcctc attcactccc gattcttcct catcctcaac atcgtcgtct     300
ttggctgaaa ttcccgaaga cgttatgatg gagatgctgg tagatcaggg aactgatgca     360
tcgtcatccg cctccacgtc cacctcatct gtttcgagat cggagcgga cacgttcatg      420
aatacaccgg atgatgtgat gatgaatgat gatatggaac cgattcctcg tgatcggtgc     480
aatacgtggc caatgcgtag gccgcaactc gaaccaccac tcaactcgag tcccattatt     540
catgaacaaa ttcctgaaga agatgctgac ctatacggga gcaatgagca atgtggacag     600
ctcggcggag catcttcaaa cgggtcgaca gcaatgcttc atactccaga tggaagcaat     660
tctcatcaga catcgtttct tcggagtttc agaatgtccg aatcgccaga cgataccgta     720
tcgggaaaaa agacaacgac cagacggaac gcttggggaa atatgtcata tgctgaactt     780
atcactacag ccattatggc tagtccagag aaacggttaa ctcttgcaca agtttacgaa     840
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tggaagaact cgatccgtca caatctgtct cttcattctc gtttcatgcg aattcagaat     960
gaaggagccg gaaagagctc gtggtgggtt attaatccag atgcaaagcc aggaatgaat    1020
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aaatctcgcc gcggagccaa gaagaggata aaggagagag cattgatggg ctcccttcac    1140
tcgacactta atggaaattc gattgccgga tcgattcaaa cgatttctca cgatttgtat    1200
gatgatgatc aatgcaagga gcatttgata acgttccatc atctttccgt ccccgaactc    1260
aatcgaacct ctcgattcct ggatcgtcgt ctcgtgtttc tccagctatt ggaagtgata    1320
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cacgagttga acagtgtccg tggatcgtgt gctcagaatc cacttcttcg aaatccaatt    1560
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acatttccaa taagggcctt agaactgcaa acaaacaaaa attggaattt tcgaatcaaa    2160
aagttcccga ataaaagtag ttcgaatatt aaaaagcatt taatttcctc tttaaaaaaa    2220
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gatttttttaa attttttttt tactttccag atagtaaaat cattagcact gaaaattatt    2340
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cagaaatctt ccgtcttcat cttttcaaat ccctacctac acacactcaa cgatcatcac    2460
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cgctgtaaat ttgtttcgca atcaaaactg ctaaaacaca ttccccaatc tgtctttttt    2820
aattgaattt ttcaaaaaat ttgatttctt gatttctctt gtaattcttt aattttcctc    2880
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gtatattgcc accacgtcga ttttaaatta aaaccatcgt ttttcttct tttctacttt    3120
tttctcgaaa aatttaacaa cacacaaaaa aatccttcaa aaaatctcag ttttaaatgg    3180
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tcttttcatt ctatttctct ctcttgtttt ctctctgtta tcctgtacat tttccttcca    3360
attctttctg gctatttctg attttcgagt tcatattctc tacgtctcac tttctctcgc    3420
gccacgcccc ctttttcgtc tccctccgcc cccaaatata tttgcgactg tatgatgatg    3480
atgatgattt aataaaaat                                                 3499

<210> 44
<211> 2704
<212> DNA
<213> Caenorhabditis elegans

<400> 44
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tatgcaacaa cttcctcaac ctctattgaa tcttaacatg acgacgttaa catcttctgg     180
cagttccgtg gccagttcca ttggaggcgg agctcaatgc tctccgtgcg cgtcgggctc     240
ctcgaccgct gcaacaaatt cctctcaaca gcagcagacc gttggtcaaa tgcttgctgc     300
atcggtgcct tgttcttcat ctggcatgac acttggaatg tcacttaatc tgtcacaagg     360
cggtggtcca atgccggcaa aaaagaagcg ttgtcgtaag aagccaaccg atcaattggc     420
acagaagaaa ccgaatccat ggggtgagga atcctattcg gatatcattg ccaaagcatt     480
ggaatcggcg ccagacggaa ggcttaaact caatgagatt tatcaatggt tctctgataa     540
tattccctac tttggagaac gatctagtcc cgaggaggcc gccggatgga agaactcgat     600
ccgtcacaat ctgtctcttc attctcgttt catgcgaatt cagaatgaag gagccggaaa     660
gagctcgtgg tgggttatta tccagatgc aaagccagga atgaatccac ggcgtacacg     720
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agccaagaag aggataaagg agagagcatt gatgggctcc cttcactcga cacttaatgg     840
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gcaaggagca tttgataacg ttccatcatc tttccgtccc cgaactcaat cgaacctctc     960
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tgtccgtgga tcgtgtgctc agaatccact tcttcgaaat ccaattgtgc caagcactaa    1260
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aacaacacac aaaaaaatcc ttcaaaaaat ctcagtttta aatggtgtgg caatatatcg    2400
gatcccctc tacaccagaa cagtcttgca atttcagaga atgattttca gatttttcat    2460
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ttctgatttt cgagttcata ttctctacgt ctcactttct ctcgcgccac gccccctttt    2640
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aaat                                                                 2704
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<210> 45
<211> 510
<212> PRT
<213> Caenorhabditis elegans

<400> 45
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            20                  25                  30
Asn Thr Pro Asp Asp Val Met Met Asn Asp Asp Met Glu Pro Ile Pro
            35                  40                  45
Arg Asp Arg Cys Asn Thr Trp Pro Met Arg Arg Pro Gln Leu Glu Pro
        50                  55                  60
Pro Leu Asn Ser Ser Pro Ile Ile His Glu Gln Ile Pro Glu Glu Asp
65                  70                  75                  80
Ala Asp Leu Tyr Gly Ser Asn Glu Gln Cys Gly Gln Leu Gly Gly Ala
                85                  90                  95
Ser Ser Asn Gly Ser Thr Ala Met Leu His Thr Pro Asp Gly Ser Asn
            100                 105                 110
Ser His Gln Thr Ser Phe Pro Ser Asp Phe Arg Met Ser Glu Ser Pro
            115                 120                 125
Asp Asp Thr Val Ser Gly Lys Lys Thr Thr Thr Arg Arg Asn Ala Trp
        130                 135                 140
Gly Asn Met Ser Tyr Ala Glu Leu Ile Thr Thr Ala Ile Met Ala Ser
145                 150                 155                 160
Pro Glu Lys Arg Leu Thr Leu Ala Gln Val Tyr Glu Trp Met Val Gln
                165                 170                 175
Asn Val Pro Tyr Phe Arg Asp Lys Gly Asp Ser Asn Ser Ser Ala Gly
            180                 185                 190
Trp Lys Asn Ser Ile Arg His Asn Leu Ser Leu His Ser Arg Phe Met
            195                 200                 205
Arg Ile Gln Asn Glu Gly Ala Gly Lys Ser Ser Trp Trp Val Ile Asn
        210                 215                 220
Pro Asp Ala Lys Pro Gly Met Asn Pro Arg Arg Thr Arg Glu Arg Ser
225                 230                 235                 240
Asn Thr Ile Glu Thr Thr Thr Lys Ala Gln Leu Glu Lys Ser Arg Arg
                245                 250                 255
Gly Ala Lys Lys Arg Ile Lys Glu Arg Ala Leu Met Gly Ser Leu His
            260                 265                 270
Ser Thr Leu Asn Gly Asn Ser Ile Ala Gly Ser Ile Gln Thr Ile Ser
            275                 280                 285
His Asp Leu Tyr Asp Asp Asp Ser Met Gln Gly Ala Phe Asp Asn Val
        290                 295                 300
Pro Ser Ser Phe Arg Pro Arg Thr Gln Ser Asn Leu Ser Ile Pro Gly
305                 310                 315                 320
Ser Ser Ser Arg Val Ser Pro Ala Ile Gly Ser Asp Ile Tyr Asp Asp
                325                 330                 335
Leu Glu Phe Pro Ser Trp Val Gly Glu Ser Val Pro Ala Ile Pro Ser
            340                 345                 350
Asp Ile Val Asp Arg Thr Asp Gln Met Arg Ile Asp Ala Thr Thr His
        355                 360                 365
Ile Gly Gly Val Gln Ile Lys Gln Glu Ser Lys Pro Ile Lys Thr Glu
        370                 375                 380
Pro Ile Ala Pro Pro Pro Ser Tyr His Glu Leu Asn Ser Val Arg Gly
385                 390                 395                 400
Ser Cys Ala Gln Asn Pro Leu Leu Arg Asn Pro Ile Val Pro Ser Thr
                405                 410                 415
Asn Phe Lys Pro Met Pro Leu Pro Gly Ala Tyr Gly Asn Tyr Gln Asn
```

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```
                420                        425                        430
Gly Gly Ile Thr Pro Ile Asn Trp Leu Ser Thr Ser Asn Ser Ser Pro
            435                        440                        445
Leu Pro Gly Ile Gln Ser Cys Gly Ile Val Ala Ala Gln His Thr Val
        450                        455                        460
Ala Ser Ser Ser Ala Leu Pro Ile Asp Leu Glu Asn Leu Thr Leu Pro
465                        470                        475                        480
Asp Gln Pro Leu Met Asp Thr Met Asp Val Asp Ala Leu Ile Arg His
                485                        490                        495
Glu Leu Ser Gln Ala Gly Gly Gln His Ile His Phe Asp Leu
            500                        505                        510


<210> 46
<211> 509
<212> PRT
<213> Caenorhabditis elegans

<400> 46
Met Gln Gln Tyr Ile Tyr Gln Glu Ser Ser Ala Thr Ile Pro His His
 1               5                        10                        15
His Leu Asn Gln His Asn Asn Pro Tyr His Pro Met His Pro His His
            20                        25                        30
Gln Leu Pro His Met Gln Gln Leu Pro Gln Pro Leu Leu Asn Leu Asn
        35                        40                        45
Met Thr Thr Leu Thr Ser Ser Gly Ser Ser Val Ala Ser Ser Ile Gly
        50                        55                        60
Gly Gly Ala Gln Cys Ser Pro Cys Ala Ser Gly Ser Ser Thr Ala Ala
65                        70                        75                        80
Thr Asn Ser Ser Gln Gln Gln Thr Val Gly Gln Met Leu Ala Ala
                85                        90                        95
Ser Val Pro Cys Ser Ser Ser Gly Met Thr Leu Gly Met Ser Leu Asn
            100                       105                       110
Leu Ser Gln Gly Gly Gly Pro Met Pro Ala Lys Lys Lys Arg Cys Arg
            115                       120                       125
Lys Lys Pro Thr Asp Gln Leu Ala Gln Lys Lys Pro Asn Pro Trp Gly
            130                       135                       140
Glu Glu Ser Tyr Ser Asp Ile Ile Ala Lys Ala Leu Glu Ser Ala Pro
145                       150                       155                       160
Asp Gly Arg Leu Lys Leu Asn Glu Ile Tyr Gln Trp Phe Ser Asp Asn
                165                       170                       175
Ile Pro Tyr Phe Gly Glu Arg Ser Ser Pro Glu Glu Ala Ala Gly Trp
            180                       185                       190
Lys Asn Ser Ile Arg His Asn Leu Ser Leu His Ser Arg Phe Met Arg
            195                       200                       205
Ile Gln Asn Glu Gly Ala Gly Lys Ser Ser Trp Trp Val Ile Asn Pro
            210                       215                       220
Asp Ala Lys Pro Gly Met Asn Pro Arg Arg Thr Arg Glu Arg Ser Asn
225                       230                       235                       240
Thr Ile Glu Thr Thr Thr Lys Ala Gln Leu Glu Lys Ser Arg Arg Gly
                245                       250                       255
Ala Lys Lys Arg Ile Lys Glu Arg Ala Leu Met Gly Ser Leu His Ser
            260                       265                       270
Thr Leu Asn Gly Asn Ser Ile Ala Gly Ser Ile Gln Thr Ile Ser His
            275                       280                       285
Asp Leu Tyr Asp Asp Asp Ser Met Gln Gly Ala Phe Asp Asn Val Pro
        290                       295                       300
Ser Ser Phe Arg Pro Arg Thr Gln Ser Asn Leu Ser Ile Pro Gly Ser
305                       310                       315                       320
```

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```
Ser Ser Arg Val Ser Pro Ala Ile Gly Ser Asp Ile Tyr Asp Asp Leu
            325             330             335
Glu Phe Pro Ser Trp Val Gly Glu Ser Val Pro Ala Ile Pro Ser Asp
            340             345             350
Ile Val Asp Arg Thr Asp Gln Met Arg Ile Asp Ala Thr Thr His Ile
            355             360             365
Gly Gly Val Gln Ile Lys Gln Glu Ser Lys Pro Ile Lys Thr Glu Pro
    370             375             380
Ile Ala Pro Pro Pro Ser Tyr His Glu Leu Asn Ser Val Arg Gly Ser
385             390             395             400
Cys Ala Gln Asn Pro Leu Leu Arg Asn Pro Ile Val Pro Ser Thr Asn
            405             410             415
Phe Lys Pro Met Pro Leu Pro Gly Ala Tyr Gly Asn Tyr Gln Asn Gly
            420             425             430
Gly Ile Thr Pro Ile Asn Trp Leu Ser Thr Ser Asn Ser Ser Pro Leu
            435             440             445
Pro Gly Ile Gln Ser Cys Gly Ile Val Ala Ala Gln His Thr Val Ala
    450             455             460
Ser Ser Ser Ala Leu Pro Ile Asp Leu Glu Asn Leu Thr Leu Pro Asp
465             470             475             480
Gln Pro Leu Met Asp Thr Met Asp Val Asp Ala Leu Ile Arg His Glu
            485             490             495
Leu Ser Gln Ala Gly Gly Gln His Ile His Phe Asp Leu
            500             505
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<210> 47
<211> 3504
<212> DNA
<213> Caenorhabditis elegans

<400> 47
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cgagaacgcc catcgctgga gaccgagaat ggcaaaggat cgctgctcct ggaaaatgaa     180
ggtgtcgcag atatcatcac tatgtgtcca ttcggagaag ttattagtgt agtatttccg     240
tggtttcttg caaatgtgcg aacatcgcta gaaatcaagc tatcagattt caaacatcaa     300
cttttcgaat tgattgctcc gatgaagtgg ggaacatatt ccgtaaagcc acaggattat     360
gtgttcagac agttgaataa tttcggcgaa attgaagtta tatttaacga cgatcaaccc     420
ctgtcgaaat tagagctcca cggcactttc ccaatgcttt ttctctacca acctgatgga     480
ataaacaggg ataaagaatt aatgagtgat ataagtcatt gtctaggata ctcactggat     540
aaactggaag agagcctcga tgaggaactc cgtcaatttc gtgcttctct ctgggctcgt     600
acgaagaaaa cgtgcttgac acgtggactt gagggtacca gtcactacgc gttccccgaa     660
gaacagtact tgtgtgttgg tgaatcgtgc ccgaaagatt ggaatcaaa agtcaaggct     720
gccaagctga gttatcagat gtttttggaga aaacgtaaag cggaaatcaa tggagtttgc     780
gagaaaatga tgaagattca aattgaattc aatccgaacg aaactccgaa atctctgctt     840
cacacgtttc tctacgaaat gcgaaaattg gatgtatacg ataccgatga tcctgcagat     900
gaaggatggt ttcttcaatt ggctggacgt accacgtttg ttacaaatcc agatgtcaaa     960
cttacgtctt atgatggtgt ccgttcggaa ctggaaagct atcgatgccc tggattcgtt    1020
gttcgccgac aatcactagt cctcaaagac tattgtcgcc caaaaccact ctacgaacca    1080
cattatgtga gagcacacga acgaaaactt gctctagacg tgctcagcgt gtctatagat    1140
agcacaccaa aacagagcaa gaacagtgac atggttatga ctgatttttcg tccgacagct    1200
tcactcaaac aagtttcact ttgggacctt gacgcgaatc ttatgatacg gcctgtgaat    1260
atttctggat tcgatttccc ggccgacgtg gatatgtacg ttcgaatcga attcagtgta    1320
tatgtgggga cactgacgct ggcatcaaaa tctacaacaa aagtgaatgc tcaatttgca    1380
aaatggaata aggaaatgta cacttttgat ctatacatga aggatatgcc accatctgca    1440
gtactcagca ttcgtgtttt gtacggaaaa gtgaaattaa aaagtgaaga attcgaagtt    1500
ggttgggtaa atatgtccct aaccgattgg agagatgaac tacgacaagg acaatttttta   1560
ttccatctgt gggctcctga accgactgcc aatcgtagta ggatcggaga aaatggagca    1620
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aggataggca ccaacgcagc ggttacaatt gaaatctcaa gttatggtgg tagagttcga    1680
atgccgagtc aaggacaata cacatatctc gtcaagcacc gaagtacttg acggaaact     1740
ttgaatatta tgggtgatga ctatgagtcg tgtatcagag atccaggata taagaagctt    1800
cagatgcttg tcaagaagca tgaatctgga attgtattag aggaagatga caacgtcat     1860
gtctggatgt ggaggagata cattcaaaag caggagcctg atttgctcat tgtgctctcc    1920
gaactcgcat ttgtgtggac tgatcgtgag aactttccg agctctatgt gatgcttgaa     1980
aaatggaaac cgccgagtgt ggcagccgcg ttgactttgc ttggaaaacg ttgcacggat    2040
cgtgtgattc gaaagtttgc agtggagaag ttgaatgagc agctgagccc ggtcacattc    2100
catcttttca tattgcctct catacaggcg ttgaagtacg aaccgcgtgc tcaatcggaa    2160
gttggaatga tgctcttgac tagagctctc tgcgattatc gaattggaca tcgacttttc    2220
tggctgctcc gtgcagagat tgctcgtttg agagattgtg atctgaaaag tgaagaatat    2280
cgccgtatct cacttctgat ggaagcttac ctccgtggaa atgaagagca catcaagatc    2340
atcacccgac aagttgacat ggttgatgag ctcacacgaa tcagcactct tgtcaaagga    2400
atgccaaaag atgttgctac gatgaaactg cgtgacgagc ttcgatcgat tagtcataaa    2460
atggaaaata tggattctcc actggatcct gtgtacaaac tgggtgaaat gataatcgac    2520
aaagccatcg tcctaggaag tgcaaaacgt ccgttaatgc ttcactggaa gaacaaaaat    2580
ccaaagagtg acctgcacct tccgttctgt gcaatgatct tcaagaatgg agacgatctt    2640
cgccaggaca tgcttgttct tcaagttctc gaagttatgg ataacatctg gaaggctgca    2700
aacattgatt gctgtttgaa cccgtacgca gttcttccaa tgggagaaat gattggaatt    2760
attgaagttg tgcctaattg taaaacaata ttcgagattc aagttggaac aggattcatg    2820
aatacagcag ttcggagtat tgatccttcg tttatgaata agtggattcg gaaacaatgc    2880
ggaattgaag atgaaaagaa gaaaagcaaa aaggactcta cgaaaaatcc catcgaaaag    2940
aagattgata atactcaagc catgaagaaa tattttgaaa gtgtcgatcg attcctatac    3000
tcgtgtgttg gatattcagt tgccacgtac ataatgggaa tcaaggatcg tcacagtgat    3060
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cacggaaaga ccaaacttgg gatccagcga gatcgtcaac cgtttattct aaccgaacac    3180
tttatgacag tgattcgatc gggtaaatct gtggatggaa attcgcatga gctacaaaaa    3240
ttcaaaacgt tatgcgtcga agcctacgaa gtaatgtgga ataatcgaga tttgttcgtt    3300
tccttgttca ccttgatgct cggaatggag ttgcctgagc tgtcgacgaa agcggatttg    3360
gatcatttga agaaaaccct cttctgcaat ggagaaagca agaagaagc gagaaagttt     3420
ttcgctggaa tctacgaaga agccttcaat ggatcatggt ctaccaaaac gaattggctc    3480
ttccacgcag tcaaacacta ctga                                          3504
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<210> 48
<211> 1167
<212> PRT
<213> Caenorhabditis elegans

<400> 48
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Arg Lys Pro Trp Ser Ser Arg Ser Asp Cys Trp Thr Arg Thr Glu Leu
1               5                   10                  15
Arg Arg Ile Ser Gln Met His Val Asn Ile Leu His Pro Gln Leu Gln
            20                  25                  30
Thr Met Val Glu Gln Trp Gln Met Arg Glu Arg Pro Ser Leu Glu Thr
        35                  40                  45
Glu Asn Gly Lys Gly Ser Leu Leu Glu Asn Glu Gly Val Ala Asp
    50                  55                  60
Ile Ile Thr Met Cys Pro Phe Gly Glu Val Ile Ser Val Val Phe Pro
65                  70                  75                  80
Trp Phe Leu Ala Asn Val Arg Thr Ser Leu Glu Ile Lys Leu Ser Asp
            85                  90                  95
Phe Lys His Gln Leu Phe Glu Leu Ile Ala Pro Met Lys Trp Gly Thr
            100                 105                 110
Tyr Ser Val Lys Pro Gln Asp Tyr Val Phe Arg Gln Leu Asn Asn Phe
        115                 120                 125
Gly Glu Ile Glu Val Ile Phe Asn Asp Asp Gln Pro Leu Ser Lys Leu
    130                 135                 140
Glu Leu His Gly Thr Phe Pro Met Leu Phe Leu Tyr Gln Pro Asp Gly
145                 150                 155                 160
```

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```
Ile Asn Arg Asp Lys Glu Leu Met Ser Asp Ile Ser His Cys Leu Gly
              165                 170                 175
Tyr Ser Leu Asp Lys Leu Glu Glu Ser Leu Asp Glu Glu Leu Arg Gln
              180                 185                 190
Phe Arg Ala Ser Leu Trp Ala Arg Thr Lys Lys Thr Cys Leu Thr Arg
              195                 200                 205
Gly Leu Glu Gly Thr Ser His Tyr Ala Phe Pro Glu Glu Gln Tyr Leu
    210                 215                 220
Cys Val Gly Glu Ser Cys Pro Lys Asp Leu Glu Ser Lys Val Lys Ala
225                 230                 235                 240
Ala Lys Leu Ser Tyr Gln Met Phe Trp Arg Lys Arg Lys Ala Glu Ile
              245                 250                 255
Asn Gly Val Cys Glu Lys Met Met Lys Ile Gln Ile Glu Phe Asn Pro
              260                 265                 270
Asn Glu Thr Pro Lys Ser Leu Leu His Thr Phe Leu Tyr Glu Met Arg
              275                 280                 285
Lys Leu Asp Val Tyr Asp Thr Asp Asp Pro Ala Asp Glu Gly Trp Phe
    290                 295                 300
Leu Gln Leu Ala Gly Arg Thr Thr Phe Val Thr Asn Pro Asp Val Lys
305                 310                 315                 320
Leu Thr Ser Tyr Asp Gly Val Arg Ser Glu Leu Glu Ser Tyr Arg Cys
              325                 330                 335
Pro Gly Phe Val Val Arg Arg Gln Ser Leu Val Leu Lys Asp Tyr Cys
              340                 345                 350
Arg Pro Lys Pro Leu Tyr Glu Pro His Tyr Val Arg Ala His Glu Arg
              355                 360                 365
Lys Leu Ala Leu Asp Val Leu Ser Val Ser Ile Asp Ser Thr Pro Lys
    370                 375                 380
Gln Ser Lys Asn Ser Asp Met Val Met Thr Asp Phe Arg Pro Thr Ala
385                 390                 395                 400
Ser Leu Lys Gln Val Ser Leu Trp Asp Leu Asp Ala Asn Leu Met Ile
              405                 410                 415
Arg Pro Val Asn Ile Ser Gly Phe Asp Phe Pro Ala Asp Val Asp Met
              420                 425                 430
Tyr Val Arg Ile Glu Phe Ser Val Tyr Val Gly Thr Leu Thr Leu Ala
              435                 440                 445
Ser Lys Ser Thr Thr Lys Val Asn Ala Gln Phe Ala Lys Trp Asn Lys
    450                 455                 460
Glu Met Tyr Thr Phe Asp Leu Tyr Met Lys Asp Met Pro Pro Ser Ala
465                 470                 475                 480
Val Leu Ser Ile Arg Val Leu Tyr Gly Lys Val Lys Leu Lys Ser Glu
              485                 490                 495
Glu Phe Glu Val Gly Trp Val Asn Met Ser Leu Thr Asp Trp Arg Asp
              500                 505                 510
Glu Leu Arg Gln Gly Gln Phe Leu Phe His Leu Trp Ala Pro Glu Pro
    515                 520                 525
Thr Ala Asn Arg Ser Arg Ile Gly Glu Asn Gly Ala Arg Ile Gly Thr
    530                 535                 540
Asn Ala Ala Val Thr Ile Glu Ile Ser Ser Tyr Gly Gly Arg Val Arg
545                 550                 555                 560
Met Pro Ser Gln Gly Gln Tyr Thr Tyr Leu Val Lys His Arg Ser Thr
              565                 570                 575
Trp Thr Glu Thr Leu Asn Ile Met Gly Asp Asp Tyr Glu Ser Cys Ile
              580                 585                 590
Arg Asp Pro Gly Tyr Lys Lys Leu Gln Met Leu Val Lys Lys His Glu
              595                 600                 605
Ser Gly Ile Val Leu Glu Glu Asp Glu Gln Arg His Val Trp Met Trp
    610                 615                 620
Arg Arg Tyr Ile Gln Lys Gln Glu Pro Asp Leu Leu Ile Val Leu Ser
```

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```
625                    630                   635                   640
Glu Leu Ala Phe Val Trp Thr Asp Arg Glu Asn Phe Ser Glu Leu Tyr
            645                   650                   655
Val Met Leu Glu Lys Trp Lys Pro Pro Ser Val Ala Ala Ala Leu Thr
            660                   665                   670
Leu Leu Gly Lys Arg Cys Thr Asp Arg Val Ile Arg Lys Phe Ala Val
            675                   680                   685
Glu Lys Leu Asn Glu Gln Leu Ser Pro Val Thr Phe His Leu Phe Ile
            690                   695                   700
Leu Pro Leu Ile Gln Ala Leu Lys Tyr Glu Pro Arg Ala Gln Ser Glu
705                   710                   715                   720
Val Gly Met Met Leu Leu Thr Arg Ala Leu Cys Asp Tyr Arg Ile Gly
            725                   730                   735
His Arg Leu Phe Trp Leu Leu Arg Ala Glu Ile Ala Arg Leu Arg Asp
            740                   745                   750
Cys Asp Leu Lys Ser Glu Glu Tyr Arg Arg Ile Ser Leu Leu Met Glu
            755                   760                   765
Ala Tyr Leu Arg Gly Asn Glu Glu His Ile Lys Ile Ile Thr Arg Gln
            770                   775                   780
Val Asp Met Val Asp Glu Leu Thr Arg Ile Ser Thr Leu Val Lys Gly
785                   790                   795                   800
Met Pro Lys Asp Val Ala Thr Met Lys Leu Arg Asp Glu Leu Arg Ser
            805                   810                   815
Ile Ser His Lys Met Glu Asn Met Asp Ser Pro Leu Asp Pro Val Tyr
            820                   825                   830
Lys Leu Gly Glu Met Ile Ile Asp Lys Ala Ile Val Leu Gly Ser Ala
            835                   840                   845
Lys Arg Pro Leu Met Leu His Trp Lys Asn Lys Asn Pro Lys Ser Asp
            850                   855                   860
Leu His Leu Pro Phe Cys Ala Met Ile Phe Lys Asn Gly Asp Asp Leu
865                   870                   875                   880
Arg Gln Asp Met Leu Val Leu Gln Val Leu Glu Val Met Asp Asn Ile
            885                   890                   895
Trp Lys Ala Ala Asn Ile Asp Cys Cys Leu Asn Pro Tyr Ala Val Leu
            900                   905                   910
Pro Met Gly Glu Met Ile Gly Ile Ile Glu Val Val Pro Asn Cys Lys
            915                   920                   925
Thr Ile Phe Glu Ile Gln Val Gly Thr Gly Phe Met Asn Thr Ala Val
            930                   935                   940
Arg Ser Ile Asp Pro Ser Phe Met Asn Lys Trp Ile Arg Lys Gln Cys
945                   950                   955                   960
Gly Ile Glu Asp Glu Lys Lys Lys Ser Lys Lys Asp Ser Thr Lys Asn
            965                   970                   975
Pro Ile Glu Lys Lys Ile Asp Asn Thr Gln Ala Met Lys Lys Tyr Phe
            980                   985                   990
Glu Ser Val Asp Arg Phe Leu Tyr Ser Cys Val Gly Tyr Ser Val Ala
            995                   1000                  1005
Thr Tyr Ile Met Gly Ile Lys Asp Arg His Ser Asp Asn Leu Met Leu
            1010                  1015                  1020
Thr Glu Asp Gly Lys Tyr Val His Ile Asp Phe Gly His Ile Leu Gly
1025                  1030                  1035                  104
His Gly Lys Thr Lys Leu Gly Ile Gln Arg Asp Arg Gln Pro Phe Ile
            1045                  1050                  1055
Leu Thr Glu His Phe Met Thr Val Ile Arg Ser Gly Lys Ser Val Asp
            1060                  1065                  1070
Gly Asn Ser His Glu Leu Gln Lys Phe Lys Thr Leu Cys Val Glu Ala
            1075                  1080                  1085
Tyr Glu Val Met Trp Asn Asn Arg Asp Leu Phe Val Ser Leu Phe Thr
            1090                  1095                  1100
```

```
Leu Met Leu Gly Met Glu Leu Pro Glu Leu Ser Thr Lys Ala Asp Leu
1105                1110               1115                  112
Asp His Leu Lys Lys Thr Leu Phe Cys Asn Gly Glu Ser Lys Glu Glu
                1125               1130               1135
Ala Arg Lys Phe Phe Ala Gly Ile Tyr Glu Glu Ala Phe Asn Gly Ser
            1140               1145               1150
Trp Ser Thr Lys Thr Asn Trp Leu Phe His Ala Val Lys His Tyr
        1155               1160               1165
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<210> 49
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe/primer derived from C. elegans

<400> 49
ggaaatattt taggccagat gcg   23

<210> 50
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe/primer derived from C. elegans

<400> 50
cggacagtcc tgaatacacc   20

<210> 51
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Probe/primer derived from C. elegans

<400> 51
tctcgttgtt tgccgtcgga tgtctgcc   28

<210> 52
<211> 3017
<212> DNA
<213> Caenorhabditis elegans

<400> 52
gtaatcaaat tgtaaaggaa aaatattaat agtcagagta cacataaatg ggtgatcatc   60
ataatttaac gggccttccc ggtacctcca tcccgccaca gttcaactat tctcagcccg   120
gtaccagcac cggaggcccg ctttatggtg gaaaaccttc tcatggattg gaagatattc   180
ctgatgtaga ggaatatgag aggaacctgc tcggggctgg agcaggtttt aatctgctca   240
atgtaggaaa tatggctaat gttcccgacg agcacacacc gatgatgtca ccagtgaata   300
caactacaaa gattctacaa cggagtggta ttaaaatgga aatcccgcca tatttggatc   360
cagacagtca ggatgatgac ccggaagatg gtgtcaacta cccggatcca gatttatttg   420
acacaaaaaa cacaaatatg accgagtacg atttggatgt gttgaagctt ggaaaaccag   480
cagtagatga agcacggaaa aagatcgaag ttcccgacgc tagtgcgccg ccaaacaaaa   540
ttgtagaata tttgatgtat tatagaacgt taaaagaaag tgaactcata caactgaatg   600
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cgtatcggac aaaacgaaat cgattatcgt tgaacttggt caaaaacaat attgatcgag      660
agttcgacca aaaagcttgc gagtccctgg tgaaaaaatt gaaggataag aagaatgatc      720
tccagaacct gattgatgtg gttctttcaa aaggtacaaa atataccggt tgcattacaa      780
ttccaaggac acttgatggc cggttacagg tccacggaag aaaaggtttc cctcacgtag      840
tctatggcaa actgtggagg tttaatgaaa tgacaaaaaa cgaaacgcgt catgtggacc      900
actgcaagca cgcatttgaa atgaaaagtg acatggtatg cgtgaatccc tatcactacg      960
aaattgtcat tggaactatg attgttgggc agagggatca tgacaatcga gatatgccgc     1020
cgccacatca acgctaccac actccaggtc ggcaggatcc agttgacgat atgagtagat     1080
ttataccacc agcttccatt cgtccgcctc cgatgaacat gcacacaagg cctcagccta     1140
tgcctcaaca attgccttca gttggcgcaa cgtttgccca tcctctccca catcaggcgc     1200
cacataaccc aggggtttca catccgtact ccattgctcc acagacccat tacccgttga     1260
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gatatggaat gaatgggccg agttgctctt cagaaaacaa caatccattc caccaaaatc     1380
accattataa tgatattagc catccaaatc actattccta cgactgtggt ccgaacttgt     1440
acgggtttcc aactccttat ccggattttc accatccttt caatcagcaa ccacaccagc     1500
cgccacaact atcacaaaac catacgtccc aacaaggcag tcatcaacca gggcaccaag     1560
gtcaggtacc gaatgatcca ccaatttcaa gaccagtgtt acaaccatca acagtcacct     1620
tggacgtgtt ccgtcggtac tgtagacaga catttggaaa tcgatttttt gaaggagaaa     1680
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caattgtgta ctatgagaaa aatttgcaaa ttggcgagaa aaaatgttcg agaggaaatt     1980
tccacgtgga tggcggattc atttgctctg agaatcgtta cagtctcgga cttgagccaa     2040
atccaattag agaaccagtg gcgtttaaag ttcgtaaagc aatagtggat ggaattcgct     2100
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cctacgattt catggattca atctgccagt acataaccaa ctgcttcgag ccgctaggaa     2580
tggaagattt tgcaaaattg ggaatcaacg tcagtgatga ctaaatgata acttttttca     2640
ctcaccctac tagatactga tttagtctta ttccaaatca tccaacgata tcaaactttt     2700
tcctttgaac tttgcatact atgttatcac aagttccaag cagtttcaat acaaacatag     2760
gatatgttaa caactttga taagaatcaa gttaccaact gttcattgtg agctttgagc     2820
tgtatagaag gacaatgtat cccatacctc aatctttaat agtcatcagt cactggtccc     2880
gcaccaattt tttcgattcg catatgtcat atattgcacc gtggcccttt ttattgtaac     2940
ttttaatata ttttcttccc aacttgtgaa tatgattgat gaaccaccat tttgagtaat     3000
aaatgtattt tttgtgg                                                    3017
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<210> 53
<211> 3119
<212> DNA
<213> Caenorhabditis elegans

<400> 53
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ataatttaac gggccttccc ggtacctcca tcccgccaca gttcaactat tctcagcccg      120
gtaccagcac cggaggcccg ctttatggtg gaaaaccttc tcatggattg aagatattc       180
ctgatgtaga ggaatatgag aggaacctgc tcggggctgg agcaggtttt aatctgctca      240
atgtaggaaa tatggctaat gaatttaaac caataatcac attggacacg aaaccacctc      300
gtgatgccaa caagtcattg gcattcaatg gcgggttgaa gctaatcact ccgaaaactg      360
aagttcccga cgagcacaca ccgatgatgt caccagtgaa tacaactaca aagattctac      420
aacggagtgg tattaaaatg gaaatcccgc catatttgga tccagacagt caggatgatg      480
acccggaaga tggtgtcaac tacccggatc cagatttatt tgacacaaaa aacacaaata      540
tgaccgagta cgatttggat gtgttgaagc ttggaaaacc agcagtagat gaagcacgga      600
aaaagatcga agttcccgac gctagtgcgc cgccaaacaa aattgtagaa tatttgatgt      660
```

```
attatagaac gttaaaagaa agtgaactca tacaactgaa tgcgtatcgg acaaaacgaa    720
atcgattatc gttgaacttg gtcaaaaaca atattgatcg agagttcgac caaaaagctt    780
gcgagtccct ggtgaaaaaa ttgaaggata agaagaatga tctccagaac ctgattgatg    840
tggttctttc aaaaggtaca aaatataccg gttgcattac aattccaagg acacttgatg    900
gccggttaca ggtccacgga agaaaaggtt tccctcacgt agtctatggc aaactgtgga    960
ggtttaatga aatgacaaaa aacgaaacgc gtcatgtgga ccactgcaag cacgcatttg   1020
aaatgaaaag tgacatggta tgcgtgaatc cctatcacta cgaaattgtc attggaacta   1080
tgattgttgg gcagagggat catgacaatc gagatatgcc gccgccacat caacgctacc   1140
acactccagg tcggcaggat ccagttgacg atatgagtag atttatacca ccagcttcca   1200
ttcgtccgcc tccgatgaac atgcacacaa ggcctcagcc tatgcctcaa caattgcctt   1260
cagttggcgc aacgtttgcc catcctctcc cacatcaggc gccacataac ccaggggttt   1320
cacatccgta ctccattgct ccacagaccc attacccgtt gaacatgaac ccaattccgc   1380
aaatgccgca aatgccacaa atgccaccac ctctccatca gggatatgga atgaatgggc   1440
cgagttgctc ttcagaaaac aacaatccat tccaccaaaa tcaccattat aatgatatta   1500
gccatccaaa tcactattcc tacgactgtg gtccgaactt gtacgggttt ccaactcctt   1560
atccggattt tcaccatcct ttcaatcagc aaccacacca gccgccacaa ctatcacaaa   1620
accatacgtc ccaacaaggc agtcatcaac cagggcacca aggtcaggta ccgaatgatc   1680
caccaatttc aagaccagtg ttacaaccat caacagtcac cttggacgtg ttccgtcggt   1740
actgtagaca gacatttgga aatcgatttt ttgaaggaga aagtgaacaa tccggcgcaa   1800
taattcggtc tagtaacaaa ttcattgaag aatttgattc gccgatttgt ggtgtgacag   1860
ttgttcgacc gcggatgaca gacggtgagg ttttggagaa catcatgccg gaagatgcac   1920
catatcatga catttgcaag ttcattttga ggctcacatc agaaagtgta actttctcag   1980
gagaggggcc agaagttagt gatttgaacg aaaaatgggg aacaattgtg tactatgaga   2040
aaaatttgca aattggcgag aaaaaatgtt cgagaggaaa tttccacgtg gatggcggat   2100
tcatttgctc tgagaatcgt tacagtctcg gacttgagcc aaatccaatt agagaaccag   2160
tggcgtttaa agttcgtaaa gcaatagtgg atggaattcg cttttcctac aaaaaagacg   2220
ggagtgtttg gcttcaaaac cgcatgaagt acccggtatt tgtcacttct gggtatctcg   2280
acgagcaatc aggaggccta agaaggata aagtgcacaa agtttacgga tgtgcgtcta   2340
tcaaaacgtt tggcttcaac gtttccaaac aaatcatcag agacgcgctt ctttccaagc   2400
aaatggcaac aatgtacttg caaggaaaat tgactccgat gaattatatc tacgagaaga   2460
agactcagga agagctgcga agggaagcaa cacgcaccac tgattcattg gccaagtact   2520
gttgtgtccg tgtctcgttc tgcaaaggat ttggagaagc atacccagaa cgcccgtcaa   2580
ttcatgattg tccagtttgg attgagttga aaatcaacat tgcctacgat ttcatggatt   2640
caatctgcca gtacataacc aactgcttcg agccgctagg aatggaagat tttgcaaaat   2700
tgggaatcaa cgtcagtgat gactaaatga taactttttt cactcaccct actagatact   2760
gatttagtct tattccaaat catccaacga tatcaaactt tttcctttga actttgcata   2820
ctatgttatc acaagttcca agcagtttca atacaaacat aggatatgtt aacaactttt   2880
gataagaatc aagttaccaa ctgttcattg tgagctttga gctgtataga aggacaatgt   2940
atcccatacc tcaatcttta atagtcatca gtcactggtc ccgcaccaat tttttcgatt   3000
cgcatatgtc atatattgca ccgtggccct ttttattgta acttttaata tattttcttc   3060
ccaacttgtg aatatgattg atgaaccacc attttgagta ataaatgtat tttttgtgg    3119
```

<210> 54
<211> 103
<212> PRT
<213> Caenorhabditis elegans

<400> 54

```
Lys Lys Thr Thr Thr Arg Arg Asn Ala Trp Gly Asn Met Ser Tyr Ala
1               5                   10                  15
Glu Leu Ile Thr Thr Ala Ile Met Ala Ser Pro Glu Lys Arg Leu Thr
            20                  25                  30
Leu Ala Gln Val Tyr Glu Trp Met Val Gln Asn Val Pro Tyr Phe Arg
        35                  40                  45
Asp Lys Gly Asp Ser Asn Ser Ser Ala Gly Trp Lys Asn Ser Ile Arg
    50                  55                  60
His Asn Leu Ser Leu His Ser Arg Phe Met Arg Ile Gln Asn Glu Gly
65                  70                  75                  80
Ala Gly Lys Ser Ser Trp Trp Val Ile Asn Pro Asp Ala Lys Pro Gly
```

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```
                    85              90                    95
Met Asn Pro Arg Arg Thr Arg
                100


<210> 55
<211> 41
<212> PRT
<213> Caenorhabditis elegans

<400> 55
Thr Phe Met Asn Thr Pro Asp Asp Val Met Met Asn Asp Asp Met Glu
 1               5                   10                  15
Pro Ile Pro Arg Asp Arg Cys Asn Thr Trp Pro Met Arg Arg Pro Gln
            20                  25                  30
Leu Glu Pro Pro Leu Asn Ser Ser Pro
         35                  40


<210> 56
<211> 109
<212> PRT
<213> Caenorhabditis elegans

<400> 56
Asp Asp Thr Val Ser Gly Lys Lys Thr Thr Thr Arg Arg Asn Ala Trp
 1               5                   10                  15
Gly Asn Met Ser Tyr Ala Glu Leu Ile Thr Thr Ala Ile Met Ala Ser
            20                  25                  30
Pro Glu Lys Arg Leu Thr Leu Ala Gln Val Tyr Glu Trp Met Val Gln
         35                  40                  45
Asn Val Pro Tyr Phe Arg Asp Lys Gly Asp Ser Asn Ser Ser Ala Gly
     50                  55                  60
Trp Lys Asn Ser Ile Arg His Asn Leu Ser Leu His Ser Arg Phe Met
65                  70                  75                  80
Arg Ile Gln Asn Glu Gly Ala Gly Lys Ser Ser Trp Trp Val Ile Asn
                85                  90                  95
Pro Asp Ala Lys Pro Gly Met Asn Pro Arg Arg Thr Arg
            100                 105


<210> 57
<211> 655
<212> PRT
<213> Homo sapiens

<400> 57
Met Ala Glu Ala Pro Gln Val Val Glu Ile Asp Pro Asp Phe Glu Pro
 1               5                   10                  15
Leu Pro Arg Pro Arg Ser Cys Thr Trp Pro Leu Pro Arg Pro Glu Phe
            20                  25                  30
Ser Gln Ser Asn Ser Ala Thr Ser Ser Pro Ala Pro Ser Gly Ser Ala
         35                  40                  45
Ala Ala Asn Pro Asp Ala Ala Ala Gly Leu Pro Ser Ala Ser Ala Ala
     50                  55                  60
Ala Val Ser Ala Asp Phe Met Ser Asn Leu Ser Leu Leu Glu Glu Ser
65                  70                  75                  80
Glu Asp Phe Pro Gln Ala Pro Gly Ser Val Ala Ala Ala Val Ala Ala
                85                  90                  95
```

```
Ala Ala Ala Ala Ala Ala Thr Gly Gly Leu Cys Gly Asp Phe Gln Gly
        100                 105                 110
Pro Glu Ala Gly Cys Leu His Pro Ala Pro Pro Gln Pro Pro Pro Pro
        115                 120                 125
Gly Pro Val Ser Gln His Pro Pro Val Pro Pro Ala Ala Ala Gly Pro
        130                 135                 140
Leu Ala Gly Gln Pro Arg Lys Ser Ser Ser Ser Arg Arg Asn Ala Trp
145                 150                 155                 160
Gly Asn Leu Ser Tyr Ala Asp Leu Ile Thr Lys Ala Ile Glu Ser Ser
                165                 170                 175
Ala Glu Lys Arg Leu Thr Leu Ser Gln Ile Tyr Glu Trp Met Val Lys
        180                 185                 190
Ser Val Pro Tyr Phe Lys Asp Lys Gly Asp Ser Asn Ser Ser Ala Gly
        195                 200                 205
Trp Lys Asn Ser Ile Arg His Asn Leu Ser Leu His Ser Lys Phe Ile
    210                 215                 220
Arg Val Gln Asn Glu Gly Thr Gly Lys Ser Ser Trp Trp Met Leu Asn
225                 230                 235                 240
Pro Glu Gly Gly Lys Ser Gly Lys Ser Pro Arg Arg Arg Ala Ala Ser
                245                 250                 255
Met Asp Asn Asn Ser Lys Phe Ala Lys Ser Arg Ser Arg Ala Ala Lys
        260                 265                 270
Lys Lys Ala Ser Leu Gln Ser Gly Gln Glu Gly Ala Gly Asp Ser Pro
        275                 280                 285
Gly Ser Gln Phe Ser Lys Trp Pro Ala Ser Pro Gly Ser His Ser Asn
    290                 295                 300
Asp Asp Phe Asp Asn Trp Ser Thr Phe Arg Pro Arg Thr Ser Ser Asn
305                 310                 315                 320
Ala Ser Thr Ile Ser Gly Arg Leu Ser Pro Ile Met Thr Glu Gln Asp
                325                 330                 335
Asp Leu Gly Glu Gly Asp Val His Ser Met Val Tyr Pro Pro Ser Ala
        340                 345                 350
Ala Lys Met Ala Ser Thr Leu Pro Ser Leu Ser Glu Ile Ser Asn Pro
        355                 360                 365
Glu Asn Met Glu Asn Leu Leu Asp Asn Leu Asn Leu Leu Ser Ser Pro
    370                 375                 380
Thr Ser Leu Thr Val Ser Thr Gln Ser Ser Pro Gly Thr Met Met Gln
385                 390                 395                 400
Gln Thr Pro Cys Tyr Ser Phe Ala Pro Pro Asn Thr Ser Leu Asn Ser
                405                 410                 415
Pro Ser Pro Asn Tyr Gln Lys Tyr Thr Tyr Gly Gln Ser Ser Met Ser
                420                 425                 430
Pro Leu Pro Gln Met Pro Ile Gln Thr Leu Gln Asp Asn Lys Ser Ser
        435                 440                 445
Tyr Gly Gly Met Ser Gln Tyr Asn Cys Ala Pro Gly Leu Leu Lys Glu
    450                 455                 460
Leu Leu Thr Ser Asp Ser Pro Pro His Asn Asp Ile Met Thr Pro Val
465                 470                 475                 480
Asp Pro Gly Val Ala Gln Pro Asn Ser Arg Val Leu Gly Gln Asn Val
                485                 490                 495
Met Met Gly Pro Asn Ser Val Met Ser Thr Tyr Gly Ser Gln Ala Ser
                500                 505                 510
His Asn Lys Met Met Asn Pro Ser Ser His Thr His Pro Gly His Ala
        515                 520                 525
Gln Gln Thr Ser Ala Val Asn Gly Arg Pro Leu Pro His Thr Val Ser
        530                 535                 540
Thr Met Pro His Thr Ser Gly Met Asn Arg Leu Thr Gln Val Lys Thr
545                 550                 555                 560
Pro Val Gln Val Pro Leu Pro His Pro Met Gln Met Ser Ala Leu Gly
```

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```
                565                        570                        575
Gly Tyr Ser Ser Val Ser Ser Cys Asn Gly Tyr Gly Arg Met Gly Leu
            580                        585                        590
Leu His Gln Glu Lys Leu Pro Ser Asp Leu Asp Gly Met Phe Ile Glu
        595                        600                        605
Arg Leu Asp Cys Asp Met Glu Ser Ile Ile Arg Asn Asp Leu Met Asp
    610                        615                        620
Gly Asp Thr Leu Asp Phe Asn Phe Asp Asn Val Leu Pro Asn Gln Ser
625                        630                        635                        640
Phe Pro His Ser Val Lys Thr Thr Thr His Ser Trp Val Ser Gly
                645                        650                        655


<210> 58
<211> 98
<212> PRT
<213> Caenorhabditis elegans

<400> 58
Lys Pro Asn Pro Trp Gly Glu Glu Ser Tyr Ser Asp Ile Ile Ala Lys
 1               5                        10                        15
Ala Leu Glu Ser Ala Pro Asp Gly Arg Leu Lys Leu Asn Glu Ile Tyr
            20                        25                        30
Gln Trp Phe Ser Asp Asn Ile Pro Tyr Phe Gly Glu Arg Ser Ser Pro
        35                        40                        45
Glu Glu Ala Ala Gly Trp Lys Asn Ser Ile Arg His Asn Leu Ser Leu
    50                        55                        60
His Ser Arg Phe Met Arg Ile Gln Asn Glu Gly Ala Gly Lys Ser Ser
65                        70                        75                        80
Trp Trp Val Ile Asn Pro Asp Ala Lys Pro Gly Met Asn Pro Arg Arg
            85                        90                        95
Thr Arg


<210> 59
<211> 7
<212> PRT
<213> Caenorhabditis elegans

<400> 59
Trp Lys Asn Ser Ile Arg His
 1               5


<210> 60
<211> 121
<212> PRT
<213> Caenorhabditis elegans

<400> 60
Gln Val Leu Asp Asp His Asp Tyr Gly Arg Cys Val Asp Trp Trp Gly
 1               5                        10                        15
Val Gly Val Val Met Tyr Glu Met Met Cys Gly Arg Leu Pro Phe Tyr
            20                        25                        30
Ser Lys Asp His Asn Lys Leu Phe Glu Leu Ile Met Ala Gly Asp Leu
        35                        40                        45
Arg Phe Pro Ser Lys Leu Ser Gln Glu Ala Arg Thr Leu Leu Thr Gly
    50                        55                        60
```

```
Leu Leu Val Lys Asp Pro Thr Gln Arg Leu Gly Gly Gly Pro Glu Asp
65                  70                  75                  80
Ala Leu Glu Ile Cys Arg Ala Asp Phe Phe Arg Thr Val Asp Trp Glu
                85                  90                  95
Ala Thr Tyr Arg Lys Glu Ile Glu Pro Pro Tyr Lys Pro Asn Val Gln
            100                 105                 110
Ser Glu Thr Asp Thr Ser Tyr Phe Asp
        115                 120


<210> 61
<211> 66
<212> PRT
<213> Caenorhabditis elegans

<400> 61
Thr Met Glu Asp Phe Asp Phe Leu Lys Val Leu Gly Lys Gly Thr Phe
1               5                   10                  15
Gly Lys Val Ile Leu Cys Lys Glu Lys Arg Thr Gln Lys Leu Tyr Ala
            20                  25                  30
Ile Lys Ile Leu Lys Lys Asp Val Ile Ile Ala Arg Glu Glu Val Ala
        35                  40                  45
His Thr Leu Thr Glu Asn Arg Val Leu Gln Arg Cys Lys His Pro Phe
    50                  55                  60
Leu Thr
65


<210> 62
<211> 45
<212> PRT
<213> Caenorhabditis elegans

<400> 62
Lys Leu Glu Asn Leu Leu Leu Asp Lys Asp Gly His Ile Lys Ile Ala
1               5                   10                  15
Asp Phe Gly Leu Cys Lys Glu Glu Ile Ser Phe Gly Asp Lys Thr Ser
            20                  25                  30
Thr Phe Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val
        35                  40                  45


<210> 63
<211> 57
<212> PRT
<213> Caenorhabditis elegans

<400> 63
Tyr Phe Gln Glu Leu Lys Tyr Ser Phe Gln Glu Gln His Tyr Leu Cys
1               5                   10                  15
Phe Val Met Gln Phe Ala Asn Gly Gly Glu Leu Phe Thr His Val Arg
            20                  25                  30
Lys Cys Gly Thr Phe Ser Glu Pro Arg Ala Arg Phe Tyr Gly Ala Glu
        35                  40                  45
Ile Val Leu Ala Leu Gly Tyr Leu His
    50                  55


<210> 64
```

```
<211> 59
<212> PRT
<213> Caenorhabditis elegans

<400> 64
Ser Thr Phe Ala Ile Phe Tyr Phe Gln Thr Met Leu Phe Glu Lys Pro
 1               5                   10                  15
Arg Pro Asn Met Phe Met Val Arg Cys Leu Gln Trp Thr Thr Val Ile
            20                  25                  30
Glu Arg Thr Phe Tyr Ala Glu Ser Ala Glu Val Arg Gln Arg Trp Ile
        35                  40                  45
His Ala Ile Glu Ser Ile Ser Lys Lys Tyr Lys
    50                  55


<210> 65
<211> 33
<212> PRT
<213> Caenorhabditis elegans                    .

<400> 65
Leu Gln Glu Leu Lys Tyr Ser Phe Gln Thr Asn Asp Arg Leu Cys Phe
 1               5                   10                  15
Val Met Glu Phe Ala Ile Gly Gly Asp Leu Tyr Tyr His Leu Asn Arg
            20                  25                  30
Glu


<210> 66
<211> 21
<212> PRT
<213> Caenorhabditis elegans

<400> 66
Val Val Ile Glu Gly Trp Leu His Lys Lys Gly Glu His Ile Arg Asn
 1               5                   10                  15
Trp Arg Pro Arg Phe
            20


<210> 67
<211> 26
<212> PRT
<213> Caenorhabditis elegans

<400> 67
Phe Ser Glu Pro Arg Ala Arg Phe Tyr Gly Ser Glu Ile Val Leu Ala
 1               5                   10                  15
Leu Gly Tyr Leu His Ala Asn Ser Ile Val
            20                  25


<210> 68
<211> 39                             .
<212> PRT
<213> Caenorhabditis elegans

<400> 68
```

```
Ile Arg Val Ser Phe Cys Lys Gly Phe Gly Glu Thr Tyr Ser Arg Leu
1               5                   10                  15
Lys Val Val Asn Leu Pro Cys Trp Ile Glu Ile Ile Leu His Glu Pro
            20                  25                  30
Ala Asp Glu Tyr Asp Thr Val
        35


<210> 69
<211> 45
<212> PRT
<213> Caenorhabditis elegans

<400> 69
Ser Arg Asn Ser Lys Ser Ser Gln Ile Arg Asn Thr Val Gly Ala Gly
1               5                   10                  15
Ile Gln Leu Ala Tyr Glu Asn Gly Glu Leu Trp Leu Thr Val Leu Thr
            20                  25                  30
Asp Gln Ile Val Phe Val Gln Cys Pro Phe Leu Asn Gln
        35                  40                  45


<210> 70
<211> 29
<212> PRT
<213> Caenorhabditis elegans

<400> 70
Asn Glu Met Leu Asp Pro Glu Pro Lys Tyr Pro Lys Glu Glu Lys Pro
1               5                   10                  15
Trp Cys Thr Ile Phe Tyr Tyr Glu Leu Thr Val Arg Val
            20                  25


<210> 71
<211> 29
<212> PRT
<213> Caenorhabditis elegans

<400> 71
Gln Leu Gly Lys Ala Phe Glu Ala Lys Val Pro Thr Ile Thr Ile Asp
1               5                   10                  15
Gly Ala Thr Gly Ala Ser Asp Glu Cys Arg Met Ser Leu
            20                  25


<210> 72
<211> 105
<212> PRT
<213> Caenorhabditis elegans

<400> 72
Ser Pro Asp Asp Gly Leu Leu Asp Ser Ser Glu Glu Ser Arg Arg Arg
1               5                   10                  15
Gln Lys Thr Cys Arg Val Cys Gly Asp His Ala Thr Gly Tyr Asn Phe
            20                  25                  30
Asn Val Ile Thr Cys Glu Ser Cys Lys Ala Phe Phe Arg Arg Asn Ala
        35                  40                  45
Leu Arg Pro Lys Glu Phe Lys Cys Pro Tyr Ser Glu Asp Cys Glu Ile
```

```
        50                      55                      60
Asn Ser Val Ser Arg Arg Phe Cys Gln Lys Cys Arg Leu Arg Lys Cys
65                      70                      75                      80
Phe Thr Val Gly Met Lys Lys Glu Trp Ile Leu Asn Glu Glu Gln Leu
                    85                      90                      95
Arg Arg Arg Lys Asn Ser Arg Leu Asn
                100                     105


<210> 73
<211> 89
<212> PRT
<213> Caenorhabditis elegans

<400> 73
Leu Asp Ser Ser Glu Glu Ser Arg Arg Arg Gln Lys Thr Cys Arg Val
 1               5                      10                      15
Cys Gly Asp His Ala Thr Gly Tyr Asn Phe Asn Val Ile Thr Cys Glu
                20                      25                      30
Ser Cys Lys Ala Phe Phe Arg Arg Asn Ala Leu Arg Pro Lys Glu Phe
            35                      40                      45
Lys Cys Pro Tyr Ser Glu Asp Cys Glu Ile Asn Ser Val Ser Arg Arg
        50                      55                      60
Phe Cys Gln Lys Cys Arg Leu Arg Lys Cys Phe Thr Val Gly Met Lys
65                      70                      75                      80
Lys Glu Trp Ile Leu Asn Glu Glu Gln
                85


<210> 74
<211> 73
<212> PRT
<213> Caenorhabditis elegans

<400> 74
Asp Ile Met Asn Ile Met Asp Val Thr Met Arg Arg Phe Val Lys Val
 1               5                      10                      15
Ala Lys Gly Val Pro Ala Phe Arg Glu Val Ser Gln Glu Gly Lys Phe
                20                      25                      30
Ser Leu Leu Lys Gly Gly Met Ile Glu Met Leu Thr Val Arg Gly Val
            35                      40                      45
Thr Arg Tyr Asp Ala Ser Thr Asn Ser Phe Lys Thr Pro Thr Ile Lys
        50                      55                      60
Gly Gln Asn Val Ser Val Asn Val Asp
65                      70


<210> 75
<211> 112
<212> PRT
<213> Caenorhabditis elegans

<400> 75
Ser Gly Ser Leu Val Asp Leu Met Ile Lys Asn Leu Thr Ala Tyr Thr
 1               5                      10                      15
Gln Gly Leu Asn Glu Thr Val Lys Asn Arg Thr Ala Glu Leu Glu Lys
                20                      25                      30
Glu Gln Glu Lys Gly Asp Gln Leu Leu Met Glu Leu Leu Pro Lys Ser
                35                      40                      45
```

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```
Val Ala Asn Asp Leu Lys Asn Gly Ile Ala Val Asp Pro Lys Val Tyr
    50                  55                  60
Glu Asn Ala Thr Ile Leu Tyr Ser Asp Ile Val Gly Phe Thr Ser Leu
65                  70                  75                  80
Cys Ser Gln Ser Gln Pro Met Glu Val Val Thr Leu Leu Ser Gly Met
                85                  90                  95
Tyr Gln Arg Phe Asp Leu Ile Ile Ser Gln Gln Gly Gly Tyr Lys Val
            100                 105                 110
```

```
<210> 76
<211> 107
<212> PRT
<213> Caenorhabditis elegans
```

```
<400> 76
Met Glu Thr Ile Gly Asp Ala Tyr Cys Val Ala Ala Gly Leu Pro Val
 1               5                  10                  15
Val Met Glu Lys Asp His Val Lys Ser Ile Cys Met Ile Ala Leu Leu
            20                  25                  30
Gln Arg Asp Cys Leu His His Phe Glu Ile Pro His Arg Pro Gly Thr
        35                  40                  45
Phe Leu Asn Cys Arg Trp Gly Phe Asn Ser Gly Pro Val·Phe Ala Gly
    50                  55                  60
Val Ile Gly Gln Lys Ala Pro Arg Tyr Ala Cys Phe Gly Glu Ala Val
65                  70                  75                  80
Ile Leu Ala Ser Lys Met Glu Ser Ser Gly Val Glu Asp Arg Ile Gln
                85                  90                  95
Met Thr Leu Ala Ser Gln Gln Leu Leu Glu Glu
            100                 105
```

```
<210> 77
<211> 43
<212> PRT
<213> Caenorhabditis elegans
```

```
<400> 77
Asp Ile Leu Lys Gly Leu Glu Tyr Ile His Ala Ser Ala Ile Asp Phe
 1               5                  10                  15
His Gly Asn Leu Thr Leu His Asn Cys Met Leu Asp Ser His Trp Ile
            20                  25                  30
Val Lys Leu Ser Gly Phe Gly Val Asn Arg Leu
        35                  40
```

```
<210> 78
<211> 15
<212> PRT
<213> Caenorhabditis elegans
```

```
<400> 78
Asp Met Tyr Ser Phe Gly Val Ile Leu His Glu Ile Ile Leu Lys
 1               5                  10                  15
```

```
<210> 79
<211> 67
<212> PRT
```

<213> Caenorhabditis elegans

<400> 79
Ala Ile Lys Ile Asn Val Asp Asp Pro Ala Ser Thr Glu Asn Leu Asn
1   5   10   15
Tyr Leu Met Glu Ala Asn Ile Met Lys Asn Phe Lys Thr Asn Phe Ile
            20   25   30
Val Gln Leu Tyr Gly Val Ile Ser Thr Val Gln Pro Ala Met Val Val
        35   40   45
Met Glu Met Met Asp Leu Gly Asn Leu Arg Asp Tyr Leu Arg Ser Lys
    50   55   60
Arg Glu Asp
65

<210> 80
<211> 54
<212> PRT
<213> Caenorhabditis elegans

<400> 80
Val Ile Lys Lys Pro Glu Cys Cys Glu Asn Tyr Trp Tyr Lys Val Met
1   5   10   15
Lys Met Cys Trp Arg Tyr Ser Pro Arg Asp Arg Pro Thr Phe Leu Gln
            20   25   30
Leu Val His Leu Leu Ala Ala Glu Ala Ser Pro Glu Phe Arg Asp Leu
        35   40   45
Ser Phe Val Leu Thr Asp
    50

<210> 81
<211> 69
<212> PRT
<213> Caenorhabditis elegans

<400> 81
Lys Gln Asp Ser Gly Met Ala Ser Glu Leu Lys Asp Ile Phe Ala Asn
1   5   10   15
Ile His Thr Ile Thr Gly Tyr Leu Leu Val Arg Gln Ser Ser Pro Phe
            20   25   30
Ile Ser Leu Asn Met Phe Arg Asn Leu Arg Arg Ile Glu Ala Lys Ser
        35   40   45
Leu Phe Arg Asn Leu Tyr Ala Ile Thr Val Phe Glu Asn Pro Asn Leu
    50   55   60
Lys Lys Leu Phe Asp
65

<210> 82
<211> 52
<212> PRT
<213> Caenorhabditis elegans

<400> 82
Phe Pro His Leu Arg Glu Ile Thr Gly Thr Leu Leu Val Phe Glu Thr
1   5   10   15
Glu Gly Leu Val Asp Leu Arg Lys Ile Phe Pro Asn Leu Arg Val Ile
            20   25   30

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Gly Gly Arg Ser Leu Ile Gln His Tyr Ala Leu Ile Ile Tyr Arg Asn
        35   40   45
Pro Asp Leu Glu
    50

<210> 83
<211> 46
<212> PRT
<213> Caenorhabditis elegans

<400> 83
Glu Ile Gly Leu Asp Lys Leu Ser Val Ile Arg Asn Gly Gly Val Arg
 1   5   10   15
Ile Ile Asp Asn Arg Lys Leu Cys Tyr Thr Lys Thr Ile Asp Trp Lys
            20   25   30
His Leu Ile Thr Ser Ser Ile Asn Asp Val Val Val Asp Asn
        35   40   45

<210> 84
<211> 36
<212> PRT
<213> Caenorhabditis elegans

<400> 84
Tyr Asn Ala Asp Asp Trp Glu Leu Arg Gln Asp Asp Val Val Leu Gly
 1   5   10   15
Gln Gln Cys Gly Glu Gly Ser Phe Gly Lys Val Tyr Leu Gly Thr Gly
            20   25   30
Asn Asn Val Val
        35

<210> 85
<211> 24
<212> PRT
<213> Caenorhabditis elegans

<400> 85
Asp Ser Leu Ala Lys Tyr Cys Cys Val Arg Val Ser Phe Cys Lys Gly
 1   5   10   15
Phe Gly Glu Ala Tyr Pro Glu Arg
            20

<210> 86
<211> 13
<212> PRT
<213> Caenorhabditis elegans

<400> 86
Gly Trp Asp Trp Ile Val Ala Pro Pro Arg Tyr Asn Ala
 1   5   10

<210> 87
<211> 121
<212> PRT

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<213> Homo sapiens

<400> 87
Glu Val Leu Glu Asp Asn Asp Tyr Gly Arg Ala Val Asp Trp Trp Gly
1   5   10   15
Leu Gly Val Val Met Tyr Glu Met Met Cys Gly Arg Leu Pro Phe Tyr
            20   25   30
Asn Gln Asp His Glu Lys Leu Phe Glu Leu Ile Leu Met Glu Glu Ile
            35   40   45
Arg Phe Pro Arg Thr Leu Gly Pro Glu Ala Lys Ser Leu Leu Ser Gly
        50   55   60
Leu Leu Lys Lys Asp Pro Thr Gln Arg Leu Gly Gly Gly Ser Glu Asp
65   70   75   80
Ala Lys Glu Ile Met Gln His Arg Phe Phe Ala Asn Ile Val Trp Gln
                85   90   95
Asp Val Tyr Glu Lys Lys Leu Ser Pro Pro Phe Lys Pro Gln Val Thr
            100   105   110
Ser Glu Thr Asp Thr Arg Tyr Phe Asp
        115   120

<210> 88
<211> 121
<212> PRT
<213> Caenorhabditis elegans

<400> 88
Gln Val Leu Asp Asp His Asp Tyr Gly Arg Cys Val Asp Trp Trp Gly
1   5   10   15
Val Gly Val Val Met Tyr Glu Met Met Cys Gly Arg Leu Pro Phe Tyr
            20   25   30
Ser Lys Asp His Asn Lys Leu Phe Glu Leu Ile Met Ala Gly Asp Leu
            35   40   45
Arg Phe Pro Ser Lys Leu Ser Gln Glu Ala Arg Thr Leu Leu Thr Gly
        50   55   60
Leu Leu Val Lys Asp Pro Thr Gln Arg Leu Gly Gly Gly Pro Glu Asp
65   70   75   80
Ala Leu Glu Ile Cys Arg Ala Asp Phe Phe Arg Thr Val Asp Trp Glu
                85   90   95
Ala Thr Tyr Arg Lys Glu Ile Glu Pro Pro Tyr Lys Pro Asn Val Gln
            100   105   110
Ser Glu Thr Asp Thr Ser Tyr Phe Asp
        115   120

<210> 89
<211> 66
<212> PRT
<213> Homo sapiens

<400> 89
Thr Met Asn Glu Phe Glu Tyr Leu Lys Leu Leu Gly Lys Gly Thr Phe
1   5   10   15
Gly Lys Val Ile Leu Val Lys Glu Lys Ala Thr Gly Arg Tyr Tyr Ala
            20   25   30
Met Lys Ile Leu Lys Lys Glu Val Ile Val Ala Lys Asp Glu Val Ala
            35   40   45
His Thr Leu Thr Glu Asn Arg Val Leu Gln Asn Ser Arg His Pro Phe
        50   55   60

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Leu Thr
65

<210> 90
<211> 66
<212> PRT
<213> Caenorhabditis elegans

<400> 90
Thr Met Glu Asp Phe Asp Phe Leu Lys Val Leu Gly Lys Gly Thr Phe
1   5   10   15
Gly Lys Val Ile Leu Cys Lys Glu Lys Arg Thr Gln Lys Leu Tyr Ala
            20   25   30
Ile Lys Ile Leu Lys Lys Asp Val Ile Ile Ala Arg Glu Glu Val Ala
        35   40   45
His Thr Leu Thr Glu Asn Arg Val Leu Gln Arg Cys Lys His Pro Phe
    50   55   60
Leu Thr
65

<210> 91
<211> 45
<212> PRT
<213> Homo sapiens

<400> 91
Lys Leu Glu Asn Leu Met Leu Asp Lys Asp Gly His Ile Lys Ile Thr
1   5   10   15
Asp Phe Gly Leu Cys Lys Glu Gly Ile Lys Asp Gly Ala Thr Met Lys
            20   25   30
Thr Phe Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val
        35   40   45

<210> 92
<211> 45
<212> PRT
<213> Caenorhabditis elegans

<400> 92
Lys Leu Glu Asn Leu Leu Leu Asp Lys Asp Gly His Ile Lys Ile Ala
1   5   10   15
Asp Phe Gly Leu Cys Lys Glu Glu Ile Ser Phe Gly Asp Lys Thr Ser
            20   25   30
Thr Phe Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val
        35   40   45

<210> 93
<211> 57
<212> PRT
<213> Homo sapiens

<400> 93
Phe Leu Thr Ala Leu Lys Tyr Ser Phe Gln Thr His Asp Arg Leu Cys
1   5   10   15
Phe Val Met Glu Tyr Ala Asn Gly Gly Glu Leu Phe Phe His Leu Ser

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                20                      25                      30
Arg Glu Arg Val Phe Ser Glu Asp Arg Ala Arg Phe Tyr Gly Ala Glu
        35                      40                      45
Ile Val Ser Ala Leu Asp Tyr Leu His
    50                      55


<210> 94
<211> 57
<212> PRT
<213> Caenorhabditis elegans

<400> 94
Tyr Phe Gln Glu Leu Lys Tyr Ser Phe Gln Glu Gln His Tyr Leu Cys
1               5                       10                      15
Phe Val Met Gln Phe Ala Asn Gly Gly Glu Leu Phe Thr His Val Arg
        20                      25                      30
Lys Cys Gly Thr Phe Ser Glu Pro Arg Ala Arg Phe Tyr Gly Ala Glu
        35                      40                      45
Ile Val Leu Ala Leu Gly Tyr Leu His
    50                      55


<210> 95
<211> 59
<212> PRT
<213> Homo sapiens

<400> 95
Asn Asn Phe Ser Val Ala Gln Cys Gln Leu Met Lys Thr Glu Arg Pro
1               5                       10                      15
Arg Pro Asn Thr Phe Ile Ile Arg Cys Leu Gln Trp Thr Thr Val Ile
        20                      25                      30
Glu Arg Thr Phe His Val Glu Thr Pro Glu Glu Arg Glu Glu Trp Ala
        35                      40                      45
Thr Ala Ile Gln Thr Val Ala Asp Gly Leu Lys
    50                      55


<210> 96
<211> 59
<212> PRT
<213> Caenorhabditis elegans

<400> 96
Ser Thr Phe Ala Ile Phe Tyr Phe Gln Thr Met Leu Phe Glu Lys Pro
1               5                       10                      15
Arg Pro Asn Met Phe Met Val Arg Cys Leu Gln Trp Thr Thr Val Ile
        20                      25                      30
Glu Arg Thr Phe Tyr Ala Glu Ser Ala Glu Val Arg Gln Arg Trp Ile
        35                      40                      45
His Ala Ile Glu Ser Ile Ser Lys Lys Tyr Lys
    50                      55


<210> 97
<211> 33
<212> PRT
<213> Homo sapiens
```

<400> 97
Leu Thr Ala Leu Lys Tyr Ser Phe Gln Thr His Asp Arg Leu Cys Phe
1   5   10   15
Val Met Glu Tyr Ala Asn Gly Gly Glu Leu Phe Phe His Leu Ser Arg
            20   25   30
Glu

<210> 98
<211> 33
<212> PRT
<213> Caenorhabditis elegans

<400> 98
Leu Gln Glu Leu Lys Tyr Ser Phe Gln Thr Asn Asp Arg Leu Cys Phe
1   5   10   15
Val Met Glu Phe Ala Ile Gly Gly Asp Leu Tyr Tyr His Leu Asn Arg
            20   25   30
Glu

<210> 99
<211> 36
<212> PRT
<213> Homo sapiens or Caenorhabditis elegans

<400> 99
Lys Leu Glu Asn Leu Leu Asp Lys Asp Gly His Ile Lys Ile Asp Phe
1   5   10   15
Gly Leu Cys Lys Glu Ile Gly Thr Phe Cys Gly Thr Pro Glu Tyr Leu
            20   25   30
Ala Pro Glu Val
        35

<210> 100
<211> 37
<212> PRT
<213> Homo sapiens or Caenorhabditis elegans

<400> 100
Leu Lys Tyr Ser Phe Gln Leu Cys Phe Val Met Ala Asn Gly Gly Glu
1   5   10   15
Leu Phe His Phe Ser Glu Arg Ala Arg Phe Tyr Gly Ala Glu Ile Val
            20   25   30
Ala Leu Tyr Leu His
        35

<210> 101
<211> 29
<212> PRT
<213> Homo sapiens or Caenorhabditis elegans

<400> 101
Phe Gln Met Glu Pro Arg Pro Asn Phe Arg Cys Leu Gln Trp Thr Thr
1   5   10   15

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Val Ile Glu Arg Thr Phe Glu Glu Arg Trp Ala Ile Lys
            20   25

<210> 102
<211> 24
<212> PRT
<213> Homo sapiens or Caenorhabditis elegans

<400> 102
Leu Leu Lys Tyr Ser Phe Gln Thr Asp Arg Leu Cys Phe Val Met Glu
 1   5   10   15
Ala Gly Gly Leu His Leu Arg Glu
            20

<210> 103
<211> 366
<212> PRT
<213> Homo sapiens

<400> 103
Arg Gly Ala Ile Arg Ile Glu Lys Asn Ala Asp Leu Cys Tyr Leu Ser
 1   5   10   15
Thr Val Asp Trp Ser Leu Ile Leu Asp Ala Val Ser Asn Asn Tyr Ile
            20   25   30
Val Gly Asn Lys Pro Pro Lys Glu Cys Gly Asp Leu Cys Pro Gly Thr
            35   40   45
Met Glu Glu Lys Pro Met Cys Glu Lys Thr Thr Ile Asn Asn Glu Tyr
    50   55   60
Asn Tyr Arg Cys Trp Thr Thr Asn Arg Cys Gln Lys Met Cys Pro Ser
65   70   75   80
Thr Cys Gly Lys Arg Ala Cys Thr Glu Asn Asn Glu Cys Cys His Pro
            85   90   95
Glu Cys Leu Gly Ser Cys Ser Ala Pro Asp Asn Asp Thr Ala Cys Val
            100   105   110
Ala Cys Arg His Tyr Tyr Tyr Ala Gly Val Cys Val Pro Ala Cys Pro
            115   120   125
Pro Asn Thr Tyr Arg Phe Glu Gly Trp Arg Cys Val Asp Arg Asp Phe
            130   135   140
Cys Ala Asn Ile Leu Ser Ala Glu Ser Ser Asp Ser Glu Gly Phe Val
145   150   155   160
Ile His Asp Gly Glu Cys Met Gln Glu Cys Pro Ser Gly Phe Ile Arg
            165   170   175
Asn Gly Ser Gln Ser Met Tyr Cys Ile Pro Cys Glu Gly Pro Cys Pro
            180   185   190
Lys Val Cys Glu Glu Glu Lys Lys Thr Lys Thr Ile Asp Ser Val Thr
            195   200   205
Ser Ala Gln Met Leu Gln Gly Cys Thr Ile Phe Lys Gly Asn Leu Leu
    210   215   220
Ile Asn Ile Arg Arg Gly Asn Asn Ile Ala Ser Glu Leu Glu Asn Phe
225   230   235   240
Met Gly Leu Ile Glu Val Val Thr Gly Tyr Val Lys Ile Arg His Ser
            245   250   255
His Ala Leu Val Ser Leu Ser Phe Leu Lys Asn Leu Arg Leu Ile Leu
            260   265   270
Gly Glu Glu Gln Leu Glu Gly Asn Tyr Ser Phe Tyr Val Leu Asp Asn
            275   280   285
Gln Asn Leu Gln Gln Leu Trp Asp Trp Asp His Arg Asn Leu Thr Ile

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      290                     295                     300
Lys Ala Gly Lys Met Tyr Phe Ala Phe Asn Pro Lys Leu Cys Val Ser
305                     310                     315                     320
Glu Ile Tyr Arg Met Glu Glu Val Thr Gly Thr Lys Gly Arg Gln Ser
                  325                     330                     335
Lys Gly Asp Ile Asn Thr Arg Asn Asn Gly Glu Arg Ala Ser Cys Glu
                  340                     345                     350
Ser Asp Val Leu His Phe Thr Ser Thr Thr Thr Ser Lys Asn
              355                     360                     365


<210> 104
<211> 370
<212> PRT
<213> Homo sapiens

<400> 104
Arg Gly Ser Val Arg Ile Glu Lys Asn Asn Glu Leu Cys Tyr Leu Ala
 1               5                       10                      15
Thr Ile Asp Trp Ser Arg Ile Leu Asp Ser Val Glu Asp Asn Tyr Ile
            20                      25                      30
Val Leu Asn Lys Asp Asp Asn Glu Glu Cys Gly Asp Ile Cys Pro Gly
            35                      40                      45
Thr Ala Lys Gly Lys Thr Asn Cys Pro Ala Thr Val Ile Asn Gly Gln
        50                      55                      60
Phe Val Glu Arg Cys Trp Thr His Ser His Cys Gln Lys Val Cys Pro
65                      70                      75                      80
Thr Ile Cys Lys Ser His Gly Cys Thr Ala Glu Gly Leu Cys Cys His
                  85                      90                      95
Ser Glu Cys Leu Gly Asn Cys Ser Gln Pro Asp Asp Pro Thr Lys Cys
            100                     105                     110
Val Ala Cys Arg Asn Phe Tyr Leu Asp Gly Arg Cys Val Glu Thr Cys
        115                     120                     125
Pro Pro Pro Tyr Tyr His Phe Gln Asp Trp Arg Cys Val Asn Phe Ser
    130                     135                     140
Phe Cys Gln Asp Leu His His Lys Cys Lys Asn Ser Arg Arg Gln Gly
145                     150                     155                     160
Cys His Gln Tyr Val Ile His Asn Asn Lys Cys Ile Pro Glu Cys Pro
                  165                     170                     175
Ser Gly Tyr Thr Met Asn Ser Ser Asn Leu Leu Cys Thr Pro Cys Leu
            180                     185                     190
Gly Pro Cys Pro Lys Val Cys His Leu Leu Glu Gly Glu Lys Thr Ile
            195                     200                     205
Asp Ser Val Thr Ser Ala Gln Glu Leu Arg Gly Cys Thr Val Ile Asn
    210                     215                     220
Gly Ser Leu Ile Ile Asn Ile Arg Gly Gly Asn Asn Leu Ala Ala Glu
225                     230                     235                     240
Leu Glu Ala Asn Leu Gly Leu Ile Glu Glu Ile Ser Gly Tyr Leu Lys
                  245                     250                     255
Ile Arg Arg Ser Tyr Ala Leu Val Ser Leu Ser Phe Phe Arg Lys Leu
            260                     265                     270
Arg Leu Ile Arg Gly Glu Thr Leu Glu Ile Gly Asn Tyr Ser Phe Tyr
            275                     280                     285
Ala Leu Asp Asn Gln Asn Leu Arg Gln Leu Trp Asp Trp Ser Lys His
            290                     295                     300
Asn Leu Thr Ile Thr Gln Gly Lys Leu Phe Phe His Tyr Asn Pro Lys
305                     310                     315                     320
Leu Cys Leu Ser Glu Ile His Lys Met Glu Glu Val Ser Gly Thr Lys
                  325                     330                     335
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Gly Arg Gln Glu Arg Asn Asp Ile Ala Leu Lys Thr Asn Gly Asp Gln
        340                 345                 350
Ala Ser Cys Glu Asn Glu Leu Leu Lys Phe Ser Tyr Ile Arg Thr Ser
        355                 360                 365
Phe Asp
    370


<210> 105
<211> 383
<212> PRT
<213> Drosophila melanogaster

<400> 105
Arg Gly Gly Val Arg Ile Glu Lys Asn His Lys Leu Cys Tyr Asp Arg
 1               5               10              15
Thr Ile Asp Trp Leu Glu Ile Leu Ala Glu Asn Glu Ser Gln Leu Val
        20              25              30
Val Leu Thr Glu Asn Gly Lys Glu Lys Glu Cys Ser Leu Ser Lys Cys
        35              40              45
Pro Gly Glu Ile Arg Ile Glu Glu Gly His Asp Asn Thr Ala Ile Glu
    50              55              60
Gly Glu Leu Asn Ala Ser Cys Gln Leu His Asn Asn Arg Arg Leu Cys
65              70              75                      80
Trp Asn Ser Lys Leu Cys Gln Thr Lys Cys Pro Glu Lys Cys Arg Asn
            85              90                      95
Asn Cys Ile Asp Glu His Thr Cys Cys Ser Gln Asp Cys Leu Gly Gly
        100             105             110
Cys Val Ile Asp Lys Asn Gly Asn Glu Ser Cys Ile Ser Cys Arg Asn
        115             120             125
Val Ser Phe Asn Asn Ile Cys Met Asp Ser Cys Pro Lys Gly Tyr Tyr
    130             135             140
Gln Phe Asp Ser Arg Cys Val Thr Ala Asn Glu Cys Ile Thr Leu Thr
145             150             155             160
Lys Phe Glu Thr Asn Ser Val Tyr Ser Gly Ile Pro Tyr Asn Gly Gln
            165             170             175
Cys Ile Thr His Cys Pro Thr Gly Tyr Gln Lys Ser Glu Asn Lys Arg
        180             185             190
Met Cys Glu Pro Cys Pro Gly Gly Lys Cys Asp Lys Glu Cys Ser Ser
        195             200             205
Gly Leu Ile Asp Ser Leu Glu Arg Ala Arg Glu Phe His Gly Cys Thr
    210             215             220
Ile Ile Thr Gly Thr Glu Pro Leu Thr Ile Ser Ile Lys Arg Glu Ser
225             230             235             240
Gly Ala His Val Met Asp Glu Leu Lys Tyr Gly Leu Ala Ala Val His
            245             250             255
Lys Ile Gln Ser Ser Leu Met Val His Leu Thr Tyr Gly Leu Lys Ser
        260             265             270
Leu Lys Phe Phe Gln Ser Leu Thr Glu Ile Ser Gly Asp Pro Pro Met
        275             280             285
Asp Ala Asp Lys Tyr Ala Leu Tyr Val Leu Asp Asn Arg Asp Leu Asp
    290             295             300
Glu Leu Trp Gly Pro Asn Gln Thr Val Phe Ile Arg Lys Gly Gly Val
305             310             315             320
Phe Phe His Phe Asn Pro Lys Leu Cys Val Ser Thr Ile Asn Gln Leu
            325             330             335
Leu Pro Met Leu Ala Ser Lys Pro Lys Phe Phe Glu Lys Ser Asp Glu
        340             345             350
Gly Ala Asp Ser Asn Gly Asn Arg Gly Ser Cys Gly Thr Ala Val Leu
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        355                   360                        365
Asn Val Thr Leu Gln Ser Val Gly Ala Asn Ser Ala Ser Leu Asn
    370                   375                   380


<210> 106
<211> 381
<212> PRT
<213> Caenorhabditis elegans

<400> 106
Asn Gly Gly Val Arg Ile Ile Asp Asn Arg Lys Leu Cys Tyr Thr Lys
  1               5                   10                  15
Thr Ile Asp Trp Lys His Leu Ile Thr Ser Ser Ile Asn Asp Val Val
            20                  25                  30
Val Asp Asn Ala Ala Glu Tyr Ala Val Thr Glu Thr Gly Leu Met Cys
            35                  40                  45
Pro Arg Gly Ala Cys Glu Glu Asp Lys Gly Glu Ser Lys Cys His Tyr
    50                  55                  60
Leu Glu Glu Lys Asn Gln Glu Gln Gly Val Glu Arg Val Gln Ser Cys
65                  70                  75                  80
Trp Ser Asn Thr Thr Cys Gln Lys Ser Cys Ala Tyr Asp Arg Leu Leu
            85                  90                  95
Pro Thr Lys Glu Ile Gly Pro Gly Cys Asp Ala Asn Gly Asp Arg Cys
            100                 105                 110
His Asp Gln Cys Val Gly Gly Cys Glu Arg Val Asn Asp Ala Thr Ala
            115                 120                 125
Cys His Ala Cys Lys Asn Val Tyr His Lys Gly Lys Cys Ile Glu Lys
    130                 135                 140
Cys Asp Ala His Leu Tyr Leu Leu Leu Gln Arg Arg Cys Val Thr Arg
145                 150                 155                 160
Glu Gln Cys Leu Gln Leu Asn Pro Val Leu Ser Asn Lys Thr Val Pro
            165                 170                 175
Ile Lys Ala Thr Ala Gly Leu Cys Ser Asp Lys Cys Pro Asp Gly Tyr
            180                 185                 190
Gln Ile Asn Pro Asp Asp His Arg Glu Cys Arg Lys Cys Val Gly Lys
            195                 200                 205
Cys Glu Ile Val Cys Glu Ile Asn His Val Ile Asp Thr Phe Pro Lys
    210                 215                 220
Ala Gln Ala Ile Arg Leu Cys Asn Ile Ile Asp Gly Asn Leu Thr Ile
225                 230                 235                 240
Glu Ile Arg Gly Lys Gln Asp Ser Gly Met Ala Ser Glu Leu Lys Asp
            245                 250                 255
Ile Phe Ala Asn Ile His Thr Ile Thr Gly Tyr Leu Leu Val Arg Gln
            260                 265                 270
Ser Ser Pro Phe Ile Ser Leu Asn Met Phe Arg Asn Leu Arg Arg Ile
            275                 280                 285
Glu Ala Lys Ser Leu Phe Arg Asn Leu Tyr Ala Ile Thr Val Phe Glu
            290                 295                 300
Asn Pro Asn Leu Lys Lys Leu Phe Asp Ser Thr Thr Asp Leu Thr Leu
305                 310                 315                 320
Asp Arg Gly Thr Val Ser Ile Ala Asn Asn Lys Met Leu Cys Phe Lys
            325                 330                 335
Tyr Ile Lys Gln Leu Met Ser Lys Leu Asn Ile Pro Leu Asp Pro Ile
            340                 345                 350
Asp Gln Ser Glu Gly Thr Asn Gly Glu Lys Ala Ile Cys Glu Asp Met
    355                 360                 365
Ala Ile Asn Val Ser Ile Thr Ala Val Asn Ala Asp Ser
    370                 375                 380
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<210> 107
<211> 370
<212> PRT
<213> Homo sapiens

<400> 107
Ala Leu Pro Val Ala Val Leu Leu Ile Val Gly Gly Leu Val Ile Met
 1   5   10   15
Leu Tyr Val Phe His Arg Lys Arg Asn Asn Ser Arg Leu Gly Asn Gly
            20   25   30
Val Leu Tyr Ala Ser Val Asn Pro Glu Tyr Phe Ser Ala Ala Asp Val
            35   40   45
Tyr Val Pro Asp Glu Trp Glu Val Ala Arg Glu Lys Ile Thr Met Ser
    50   55   60
Arg Glu Leu Gly Gln Gly Ser Phe Gly Met Val Tyr Glu Gly Val Ala
65   70   75   80
Lys Gly Val Val Lys Asp Glu Pro Glu Thr Arg Val Ala Ile Lys Thr
            85   90   95
Val Asn Glu Ala Ala Ser Met Arg Glu Arg Ile Glu Phe Leu Asn Glu
            100   105   110
Ala Ser Val Met Lys Glu Phe Asn Cys His His Val Val Arg Leu Leu
            115   120   125
Gly Val Val Ser Gln Gly Gln Pro Thr Leu Val Ile Met Glu Leu Met
130   135   140
Thr Arg Gly Asp Leu Lys Ser Tyr Leu Arg Ser Leu Arg Pro Glu Met
145   150   155   160
Glu Asn Asn Pro Val Leu Ala Pro Pro Ser Leu Ser Lys Met Ile Gln
            165   170   175
Met Ala Gly Glu Ile Ala Asp Gly Met Ala Tyr Leu Asn Ala Asn Lys
            180   185   190
Phe Val His Arg Asp Leu Ala Ala Arg Asn Cys Met Val Ala Glu Asp
            195   200   205
Phe Thr Val Lys Ile Gly Asp Phe Gly Met Thr Arg Asp Ile Tyr Glu
    210   215   220
Thr Asp Tyr Tyr Arg Lys Gly Gly Lys Gly Leu Leu Pro Val Arg Trp
225   230   235   240
Met Ser Pro Glu Ser Leu Lys Asp Gly Val Phe Thr Thr Tyr Ser Asp
            245   250   255
Val Trp Ser Phe Gly Val Val Leu Trp Glu Ile Ala Thr Leu Ala Glu
            260   265   270
Gln Pro Tyr Gln Gly Leu Ser Asn Glu Gln Val Leu Arg Phe Val Met
            275   280   285
Glu Gly Gly Leu Leu Asp Lys Pro Asp Asn Cys Pro Asp Met Leu Phe
    290   295   300
Glu Leu Met Arg Met Cys Trp Gln Tyr Asn Pro Lys Met Arg Pro Ser
305   310   315   320
Phe Leu Glu Ile Ile Ser Ser Ile Lys Glu Glu Met Glu Pro Gly Phe
            325   330   335
Arg Glu Val Ser Phe Tyr Tyr Ser Glu Glu Asn Lys Leu Pro Glu Pro
            340   345   350
Glu Glu Leu Asp Leu Glu Pro Glu Asn Met Glu Ser Val Pro Leu Asp
            355   360   365
Pro Ser
    370

<210> 108
<211> 374

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<212> PRT
<213> Homo sapiens

<400> 108
Ile Gly Pro Leu Ile Phe Val Phe Leu Phe Ser Val Val Ile Gly Ser
1   5   10   15
Ile Tyr Leu Phe Leu Arg Lys Arg Gln Pro Asp Gly Pro Leu Gly Pro
            20   25   30
Leu Tyr Ala Ser Ser Asn Pro Glu Tyr Leu Ser Ala Ser Asp Val Phe
            35   40   45
Pro Cys Ser Val Tyr Val Pro Asp Glu Trp Glu Val Ser Arg Glu Lys
        50   55   60
Ile Thr Leu Leu Arg Glu Leu Gly Gln Gly Ser Phe Gly Met Val Tyr
65   70   75   80
Glu Gly Asn Ala Arg Asp Ile Ile Lys Gly Glu Ala Glu Thr Arg Val
                85   90   95
Ala Val Lys Thr Val Asn Glu Ser Ala Ser Leu Arg Glu Arg Ile Glu
            100   105   110
Phe Leu Asn Glu Ala Ser Val Met Lys Gly Phe Thr Cys His His Val
        115   120   125
Val Arg Leu Leu Gly Val Val Ser Lys Gly Gln Pro Thr Leu Val Val
    130   135   140
Met Glu Leu Met Ala His Gly Asp Leu Lys Ser Tyr Leu Arg Ser Leu
145   150   155   160
Arg Pro Glu Ala Glu Asn Asn Pro Gly Arg Pro Pro Pro Thr Leu Gln
                165   170   175
Glu Met Ile Gln Met Ala Ala Glu Ile Ala Asp Gly Met Ala Tyr Leu
            180   185   190
Asn Ala Lys Lys Phe Val His Arg Asp Leu Ala Ala Arg Asn Cys Met
            195   200   205
Val Ala His Asp Phe Thr Val Lys Ile Gly Asp Phe Gly Met Thr Arg
    210   215   220
Asp Ile Tyr Glu Thr Asp Tyr Tyr Arg Lys Gly Gly Lys Gly Leu Leu
225   230   235   240
Pro Val Arg Trp Met Ala Pro Glu Ser Leu Lys Asp Gly Val Phe Thr
                245   250   255
Thr Ser Ser Asp Met Trp Ser Phe Gly Val Val Leu Trp Glu Ile Thr
                260   265   270
Ser Leu Ala Glu Gln Pro Tyr Gln Gly Leu Ser Asn Glu Gln Val Leu
            275   280   285
Lys Phe Val Met Asp Gly Gly Tyr Leu Asp Gln Pro Asp Asn Cys Pro
    290   295   300
Glu Arg Val Thr Asp Leu Met Arg Met Cys Trp Gln Phe Asn Pro Lys
305   310   315   320
Met Arg Pro Thr Phe Leu Glu Ile Val Asn Leu Leu Lys Asp Asp Leu
            325   330   335
His Pro Ser Phe Pro Glu Val Ser Phe Phe His Ser Glu Glu Asn Lys
            340   345   350
Ala Pro Glu Ser Glu Glu Leu Glu Met Glu Phe Glu Asp Met Glu Asn
    355   360   365
Val Pro Leu Asp Arg Ser
    370

<210> 109
<211> 384
<212> PRT
<213> Drosophila melanogaster

<400> 109

```
Gly Ile Gly Leu Ala Phe Leu Ile Val Ser Leu Phe Gly Tyr Val Cys
 1               5                  10                  15
Tyr Leu His Lys Arg Lys Val Pro Ser Asn Asp Leu His Met Asn Thr
            20                  25                  30
Glu Val Asn Pro Phe Tyr Ala Ser Met Gln Tyr Ile Pro Asp Asp Trp
        35                  40                  45
Glu Val Leu Arg Glu Asn Ile Ile Gln Leu Ala Pro Leu Gly Gln Gly
        50                  55                  60
Ser Phe Gly Met Val Tyr Glu Gly Ile Leu Lys Ser Phe Pro Pro Asn
65                  70                  75                  80
Gly Val Asp Arg Glu Cys Ala Ile Lys Thr Val Asn Glu Asn Ala Thr
            85                  90                  95
Asp Arg Glu Arg Thr Asn Phe Leu Ser Glu Ala Ser Val Met Lys Glu
            100                 105                 110
Phe Asp Thr Tyr His Val Val Arg Leu Leu Gly Val Cys Ser Arg Gly
        115                 120                 125
Gln Pro Ala Leu Val Val Met Glu Leu Met Lys Lys Gly Asp Leu Lys
        130                 135                 140
Ser Tyr Leu Arg Ala His Arg Pro Glu Glu Arg Asp Glu Ala Met Met
145                 150                 155                 160
Thr Tyr Leu Asn Arg Ile Gly Val Thr Gly Asn Val Gln Pro Pro Thr
                165                 170                 175
Tyr Gly Arg Ile Tyr Gln Met Ala Ile Glu Ile Ala Asp Gly Met Ala
            180                 185                 190
Tyr Leu Ala Ala Lys Lys Phe Val His Arg Asp Leu Ala Ala Arg Asn
        195                 200                 205
Cys Met Val Ala Asp Asp Leu Thr Val Lys Ile Gly Asp Phe Gly Met
    210                 215                 220
Thr Arg Asp Ile Tyr Glu Thr Asp Tyr Tyr Arg Lys Gly Thr Lys Gly
225                 230                 235                 240
Leu Leu Pro Val Arg Trp Met Pro Pro Glu Ser Leu Arg Asp Gly Val
            245                 250                 255
Tyr Ser Ser Ala Ser Asp Val Phe Ser Phe Gly Val Val Leu Trp Glu
            260                 265                 270
Met Ala Thr Leu Ala Ala Gln Pro Tyr Gln Gly Leu Ser Asn Glu Gln
        275                 280                 285
Val Leu Arg Tyr Val Ile Asp Gly Gly Val Met Glu Arg Pro Glu Asn
        290                 295                 300
Cys Pro Asp Phe Leu His Lys Leu Met Gln Arg Cys Trp His His Arg
305                 310                 315                 320
Ser Ser Ala Arg Pro Ser Phe Leu Asp Ile Ile Ala Tyr Leu Glu Pro
            325                 330                 335
Gln Cys Pro Asn Ser Gln Phe Lys Glu Val Ser Phe Tyr His Ser Glu
            340                 345                 350
Ala Gly Leu Gln His Arg Glu Lys Glu Arg Lys Glu Arg Asn Gln Leu
        355                 360                 365
Asp Ala Phe Ala Ala Val Pro Leu Asp Gln Asp Leu Gln Asp Arg Glu
    370                 375                 380
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<210> 110
<211> 380
<212> PRT
<213> Caenorhabditis elegans

<400> 110

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Gly Met Leu Leu Val Phe Leu Ile Leu Met Ser Ile Ala Gly Cys Ile
 1               5                  10                  15
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Ile Tyr Tyr Tyr Ile Gln Val Arg Tyr Gly Lys Lys Val Lys Ala Leu
        20                      25                      30
Ser Asp Phe Met Gln Leu Asn Pro Glu Tyr Cys Val Asp Asn Lys Tyr
        35                      40                      45
Asn Ala Asp Asp Trp Glu Leu Arg Gln Asp Asp Val Val Leu Gly Gln
    50                      55                      60
Gln Cys Gly Glu Gly Ser Phe Gly Lys Val Tyr Leu Gly Thr Gly Asn
65                      70                      75                      80
Asn Val Val Ser Leu Met Gly Asp Arg Phe Gly Pro Cys Ala Ile Lys
            85                      90                      95
Ile Asn Val Asp Asp Pro Ala Ser Thr Glu Asn Leu Asn Tyr Leu Met
            100                     105                     110
Glu Ala Asn Ile Met Lys Asn Phe Lys Thr Asn Phe Ile Val Gln Leu
        115                     120                     125
Tyr Gly Val Ile Ser Thr Val Gln Pro Ala Met Val Val Met Glu Met
        130                     135                     140
Met Asp Leu Gly Asn Leu Arg Asp Tyr Leu Arg Ser Lys Arg Glu Asp
145                     150                     155                     160
Glu Val Phe Asn Glu Thr Asp Cys Asn Phe Phe Asp Ile Ile Pro Arg
            165                     170                     175
Asp Lys Phe His Glu Trp Ala Ala Gln Ile Cys Asp Gly Met Ala Tyr
            180                     185                     190
Leu Glu Ser Leu Lys Phe Cys His Arg Asp Leu Ala Ala Arg Asn Cys
        195                     200                     205
Met Ile Asn Arg Asp Glu Thr Val Lys Ile Gly Asp Phe Gly Met Ala
210                     215                     220
Arg Asp Leu Phe Tyr His Asp Tyr Tyr Lys Pro Ser Gly Lys Arg Met
225                     230                     235                     240
Met Pro Val Arg Trp Met Ser Pro Glu Ser Leu Lys Asp Gly Lys Phe
            245                     250                     255
Asp Ser Lys Ser Asp Val Trp Ser Phe Gly Val Val Leu Tyr Glu Met
            260                     265                     270
Val Thr Leu Gly Ala Gln Pro Tyr Ile Gly Leu Ser Asn Asp Glu Val
        275                     280                     285
Leu Asn Tyr Ile Gly Met Ala Arg Lys Val Ile Lys Lys Pro Glu Cys
        290                     295                     300
Cys Glu Asn Tyr Trp Tyr Lys Val Met Lys Met Cys Trp Arg Tyr Ser
305                     310                     315                     320
Pro Arg Asp Arg Pro Thr Phe Leu Gln Leu Val His Leu Leu Ala Ala
            325                     330                     335
Glu Ala Ser Pro Glu Phe Arg Asp Leu Ser Phe Val Leu Thr Asp Asn
            340                     345                     350
Gln Met Ile Leu Asp Asp Ser Glu Ala Leu Asp Leu Asp Asp Ile Asp
        355                     360                     365
Asp Thr Asp Met Asn Asp Gln Val Val Glu Val Ala
        370                     375                     380
```

```
<210> 111
<211> 103
<212> PRT
<213> Caenorhabditis elegans

<400> 111
```

```
Asn Ile Asp Arg Glu Phe Asp Gln Lys Ala Cys Glu Ser Leu Val Lys
 1                   5                      10                      15
Lys Leu Lys Asp Lys Lys Asn Asp Leu Gln Asn Leu Ile Asp Val Val
            20                      25                      30
Leu Ser Lys Gly Thr Lys Tyr Thr Gly Cys Ile Thr Ile Pro Arg Thr
```

```
                35                      40                      45
Leu Asp Gly Arg Leu Gln Val His Gly Arg Lys Gly Phe Pro His Val
        50                      55                      60
Val Tyr Gly Lys Leu Trp Arg Phe Asn Glu Met Thr Lys Asn Glu Thr
65                      70                      75                      80
Arg His Val Asp His Cys Lys His Ala Phe Glu Met Lys Ser Asp Met
                        85                      90                      95
Val Cys Val Asn Pro Tyr His
                100


<210> 112
<211> 104
<212> PRT
<213> Homo sapiens

<400> 112
Gly Gly Glu Ser Glu Thr Phe Ala Lys Arg Ala Ile Glu Ser Leu Val
 1               5                      10                      15
Lys Lys Leu Lys Glu Lys Lys Asp Glu Leu Asp Ser Leu Ile Thr Ala
                20                      25                      30
Ile Thr Thr Asn Gly Ala His Pro Ser Lys Cys Val Thr Ile Gln Arg
        35                      40                      45
Thr Leu Asp Gly Arg Leu Gln Val Ala Gly Arg Lys Gly Phe Pro His
        50                      55                      60
Val Ile Tyr Ala Arg Leu Trp Arg Trp Pro Asp Leu His Lys Asn Glu
65                      70                      75                      80
Leu Lys His Val Lys Tyr Cys Gln Tyr Ala Phe Asp Leu Lys Cys Asp
                85                      90                      95
Ser Val Cys Val Asn Pro Tyr His
                100


<210> 113
<211> 205
<212> PRT
<213> Caenorhabditis elegans

<400> 113
Ile Val Tyr Tyr Glu Lys Asn Leu Gln Ile Gly Glu Lys Lys Cys Ser
 1               5                      10                      15
Arg Gly Asn Phe His Val Asp Gly Gly Phe Ile Cys Ser Glu Asn Arg
                20                      25                      30
Tyr Ser Leu Gly Leu Glu Pro Asn Pro Ile Arg Glu Pro Val Ala Phe
        35                      40                      45
Lys Val Arg Lys Ala Ile Val Asp Gly Ile Arg Phe Ser Tyr Lys Lys
        50                      55                      60
Asp Gly Ser Val Trp Leu Gln Asn Arg Met Lys Tyr Pro Val Phe Val
65                      70                      75                      80
Thr Ser Gly Tyr Leu Asp Glu Gln Ser Gly Gly Leu Lys Lys Asp Lys
                85                      90                      95
Val His Lys Val Tyr Gly Cys Ala Ser Ile Lys Thr Phe Gly Phe Asn
                100                     105                     110
Val Ser Lys Gln Ile Ile Arg Asp Ala Leu Leu Ser Lys Gln Met Ala
        115                     120                     125
Thr Met Tyr Leu Gln Gly Lys Leu Thr Pro Met Asn Tyr Ile Tyr Glu
        130                     135                     140
Lys Lys Thr Gln Glu Glu Leu Arg Arg Glu Ala Thr Arg Thr Thr Asp
145                     150                     155                     160
```

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```
Ser Leu Ala Lys Tyr Cys Cys Val Arg Val Ser Phe Cys Lys Gly Phe
            165                     170                 175
Gly Glu Ala Tyr Pro Glu Arg Pro Ser Ile His Asp Cys Pro Val Trp
            180                     185                 190
Ile Glu Leu Lys Ile Asn Ile Ala Tyr Asp Phe Met Asp
        195                     200                 205


<210> 114
<211> 212
<212> PRT
<213> Homo sapiens

<400> 114
Ile Ala Tyr Phe Glu Met Asp Val Gln Val Gly Glu Thr Phe Lys Val
 1               5                   10                  15
Pro Ser Ser Cys Pro Ile Val Thr Val Asp Gly Tyr Val Asp Pro Ser
            20                      25                  30
Gly Gly Asp Arg Phe Cys Leu Gly Gln Leu Ser Asn Val His Arg Thr
            35                      40                  45
Glu Ala Ile Glu Arg Ala Arg Leu His Ile Gly Lys Gly Val Gln Leu
        50                      55                  60
Glu Cys Lys Gly Glu Gly Asp Val Trp Val Arg Cys Leu Ser Asp His
65                      70                  75                  80
Ala Val Phe Val Gln Ser Tyr Tyr Leu Asp Arg Glu Ala Gly Arg Ala
                85                      90                  95
Pro Gly Asp Ala Val His Lys Ile Tyr Pro Ser Ala Tyr Ile Lys Val
            100                     105                 110
Phe Asp Leu Arg Gln Cys His Arg Gln Met Gln Gln Gln Ala Ala Thr
            115                     120                 125
Ala Gln Ala Ala Ala Ala Ala Gln Ala Ala Ala Val Ala Gly Asn Ile
            130                     135                 140
Pro Gly Pro Gly Ser Val Gly Gly Ile Ala Pro Ala Ile Ser Leu Ser
145                     150                     155                 160
Ala Ala Ala Gly Ile Gly Val Asp Asp Leu Arg Arg Leu Cys Ile Leu
                165                     170                 175
Arg Met Ser Phe Val Lys Gly Trp Gly Pro Asp Tyr Pro Arg Gln Ser
            180                     185                 190
Ile Lys Glu Thr Pro Cys Trp Ile Glu Ile His Leu His Arg Ala Leu
        195                     200                 205
Gln Leu Leu Asp
    210


<210> 115
<211> 50
<212> PRT
<213> Caenorhabditis elegans

<220>
<221> VARIANT
<222> (1)...(50)
<223> Xaa = Any Amino Acid

<400> 115
Leu Cys Gly Xaa Xaa Leu Val Glu Ala Leu Xaa Xaa Val Cys Gly Xaa
 1               5                   10                  15
Arg Gly Phe Phe Tyr Thr Pro Lys Thr Arg Arg Lys Arg Gly Ile Val
            20                      25                  30
```

```
Glu Gln Cys Cys Xaa Xaa Xaa Cys Xaa Xaa Xaa Gln Leu Glu Xaa Tyr
        35                  40              45
Cys Asn
    50




<210> 116
<211> 39
<212> PRT
<213> Caenorhabditis elegans

<400> 116
Leu Cys Gly Arg His Leu Ala Asp Ala Leu Tyr Phe Val Cys Gly Asn
 1               5                  10                  15
Arg Gly Phe Gly Ile Val Glu Glu Cys Cys His Asn Pro Cys Thr Leu
            20                  25                  30
Tyr Gln Leu Glu Asn Tyr Cys
        35




<210> 117
<211> 112
<212> PRT
<213> Caenorhabditis elegans

<400> 117
Met Asn Ser Val Phe Thr Ile Ile Phe Val Leu Cys Ala Leu Gln Val
 1               5                  10                  15
Ala Ala Ser Phe Arg Gln Ser Phe Gly Pro Ser Met Ser Glu Glu Ser
            20                  25                  30
Ala Ser Met Gln Leu Leu Arg Glu Leu Gln His Asn Met Met Glu Ser
        35                  40                  45
Ala His Arg Pro Met Pro Arg Ala Arg Arg Val Pro Ala Pro Gly Glu
    50                  55                  60
Thr Arg Ala Cys Gly Arg Lys Leu Ile Ser Leu Val Met Ala Val Cys
65                  70                  75                  80
Gly Asp Leu Cys Asn Pro Gln Glu Gly Lys Asp Ile Ala Thr Glu Cys
                85                  90                  95
Cys Gly Asn Gln Cys Ser Asp Asp Tyr Ile Arg Ser Ala Cys Cys Pro
            100                 105                 110




<210> 118
<211> 106
<212> PRT
<213> Caenorhabditis elegans

<400> 118
Met Phe Ser Phe Phe Thr Tyr Phe Leu Leu Ser Ala Leu Leu Leu Ser
 1               5                  10                  15
Ala Ser Cys Arg Gln Pro Ser Met Asp Thr Ser Lys Ala Asp Arg Ile
            20                  25                  30
Leu Arg Glu Ile Glu Met Glu Thr Glu Leu Glu Asn Gln Leu Ser Arg
        35                  40                  45
Ala Arg Arg Val Pro Ala Gly Glu Val Arg Ala Cys Gly Arg Arg Leu
    50                  55                  60
Leu Leu Phe Val Trp Ser Thr Cys Gly Glu Pro Cys Thr Pro Gln Glu
65                  70                  75                  80
Asp Met Asp Ile Ala Thr Val Cys Cys Thr Thr Gln Cys Thr Pro Ser
```

Tyr Ile Lys Gln Ala Cys Cys Pro Glu Lys
            100   105

<210> 119
<211> 105
<212> PRT
<213> Caenorhabditis elegans

<400> 119
Met Pro Pro Ile Ile Leu Val Phe Phe Leu Val Leu Ile Pro Ala Ser
 1   5   10   15
Gln Gln Tyr Pro Phe Ser Leu Glu Ser Leu Asn Asp Gln Ile Ile Asn
            20   25   30
Glu Glu Val Ile Glu Tyr Met Leu Glu Asn Ser Ile Arg Ser Ser Arg
        35   40   45
Thr Arg Arg Val Pro Asp Glu Lys Lys Ile Tyr Arg Cys Gly Arg Arg
    50   55   60
Ile His Ser Tyr Val Phe Ala Val Cys Gly Lys Ala Cys Glu Ser Asn
65   70   75   80
Thr Glu Val Asn Ile Ala Ser Lys Cys Cys Arg Glu Glu Cys Thr Asp
            85   90   95
Asp Phe Ile Arg Lys Gln Cys Cys Pro
            100   105

<210> 120
<211> 118
<212> PRT
<213> Caenorhabditis elegans

<400> 120
Met Ile Val Thr Leu Ile Val Phe Leu Val Ile Gly Leu Gln Met Ala
 1   5   10   15
His Leu Ser Gln Val Ser Gly Asn Asn Glu Asn Gly Phe Leu Asn Pro
            20   25   30
Phe Asp Leu Ser Gln Trp Ser Glu Glu Ile Leu His Arg Gln Tyr His
        35   40   45
His His His His His His His Gly Asn Arg Ala Arg Arg Thr Leu Glu
    50   55   60
Thr Glu Lys Ile Tyr Arg Cys Gly Arg Lys Leu Tyr Thr Asp Val Leu
65   70   75   80
Ser Ala Cys Asn Gly Pro Cys Glu Pro Gly Thr Glu Gln Asp Leu Ser
            85   90   95
Lys Leu Cys Cys Gly Asn Gln Cys Thr Phe Val Glu Ile Arg Lys Ala
            100   105   110
Cys Cys Ala Asp Lys Leu
        115

<210> 121
<211> 106
<212> PRT
<213> Caenorhabditis elegans

<400> 121
Met Asn Ala Ile Ile Phe Cys Leu Leu Phe Thr Thr Val Thr Ala Thr
 1   5   10   15

```
Tyr Glu Val Phe Gly Lys Gly Ile Glu His Arg Asn Glu His Leu Ile
          20                  25                  30
Ile Asn Gln Leu Asp Ile Ile Pro Val Glu Ser Thr Pro Thr Pro Asn
      35                  40                  45
Arg Ala Ser Arg Val Gln Lys Arg Leu Cys Gly Arg Arg Leu Ile Leu
  50                  55                  60
Phe Met Leu Ala Thr Cys Gly Glu Cys Asp Thr Asp Ser Ser Glu Asp
65                  70                  75                  80
Leu Ser His Ile Cys Cys Ile Lys Gln Cys Asp Val Gln Asp Ile Ile
              85                  90                  95
Arg Val Cys Cys Pro Asn Ser Phe Arg Lys
          100                 105


<210> 122
<211> 107
<212> PRT
<213> Caenorhabditis elegans

<400> 122
Met Lys Leu Ser Val Val Leu Ala Leu Phe Ile Ile Phe Gln Leu Gly
 1               5                  10                  15
Ala Ala Ser Leu Met Arg Asn Trp Met Phe Asp Phe Glu Lys Glu Leu
          20                  25                  30
Glu His Asp Tyr Asp Asp Ser Glu Ile Gly Phe His Asn Ile His Ser
      35                  40                  45
Leu Met Ala Arg Ser Arg Arg Gly Asp Lys Val Lys Ile Cys Gly Thr
  50                  55                  60
Lys Val Leu Lys Met Val Met Val Met Cys Gly Gly Glu Cys Ser Ser
65                  70                  75                  80
Thr Asn Glu Asn Ile Ala Thr Glu Cys Cys Glu Lys Met Cys Thr Met
              85                  90                  95
Glu Asp Ile Thr Thr Lys Cys Cys Pro Ser Arg
          100                 105


<210> 123
<211> 73
<212> PRT
<213> Caenorhabditis elegans

<400> 123
Met Lys Leu Leu His Ile Phe Ile Ile Phe Leu Leu Phe Gln Ser Cys
 1               5                  10                  15
Ser Asn Lys Met Cys Gln Tyr Ser Lys Lys Lys Tyr Lys Ile Cys Gly
          20                  25                  30
Val Arg Ala Leu Lys His Met Lys Val Tyr Cys Thr Arg Gly Met Thr
      35                  40                  45
Arg Asp Tyr Gly Lys Leu Leu Val Thr Cys Cys Ser Lys Gly Cys Asn
  50                  55                  60
Ala Ile Asp Ile Gln Arg Ile Cys Leu
65                  70


<210> 124
<211> 109
<212> PRT
<213> Caenorhabditis elegans
```

<400> 124
Met Tyr Trp Phe Arg Gln Val Tyr Arg Pro Ser Phe Phe Phe Gly Phe
 1   5   10   15
Leu Ala Ile Leu Leu Leu Ser Ser Pro Thr Pro Ser Asp Ala Ser Ile
         20   25   30
Arg Leu Cys Gly Ser Arg Leu Thr Thr Thr Leu Leu Ala Val Cys Arg
         35   40   45
Asn Gln Leu Cys Thr Gly Leu Thr Ala Phe Lys Arg Ser Ala Asp Gln
     50   55   60
Ser Tyr Ala Pro Thr Thr Arg Asp Leu Phe His Ile His His Gln Gln
65   70   75   80
Lys Arg Gly Gly Ile Ala Thr Glu Cys Cys Glu Lys Arg Cys Ser Phe
             85   90   95
Ala Tyr Leu Lys Thr Phe Cys Cys Asn Gln Asp Asp Asn
         100   105

<210> 125
<211> 110
<212> PRT
<213> Homo sapiens

<400> 125
Met Ala Leu Trp Met Arg Leu Leu Pro Leu Leu Ala Leu Leu Ala Leu
 1   5   10   15
Trp Gly Pro Asp Pro Ala Ala Ala Phe Val Asn Gln His Leu Cys Gly
         20   25   30
Ser His Leu Val Glu Ala Leu Tyr Leu Val Cys Gly Glu Arg Gly Phe
         35   40   45
Phe Tyr Thr Pro Lys Thr Arg Arg Glu Ala Glu Asp Leu Gln Val Gly
     50   55   60
Gln Val Glu Leu Gly Gly Gly Pro Gly Ala Gly Ser Leu Gln Pro Leu
65   70   75   80
Ala Leu Glu Gly Ser Leu Gln Lys Arg Gly Ile Val Glu Gln Cys Cys
             85   90   95
Thr Ser Ile Cys Ser Leu Tyr Gln Leu Glu Asn Tyr Cys Asn
         100   105   110

<210> 126
<211> 46
<212> PRT
<213> Caenorhabditis elegans

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 126
Ala Cys Gly Arg Arg Leu Leu Leu Phe Val Trp Ser Thr Cys Gly Glu
 1   5   10   15
Pro Cys Thr Xaa Xaa Xaa Gln Glu Asp Met Asp Ile Ala Thr Val Cys
         20   25   30
Cys Thr Thr Gln Cys Thr Pro Ser Tyr Ile Lys Gln Ala Cys
         35   40   45

<210> 127

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<211> 46
<212> PRT
<213> Caenorhabditis elegans

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 127
Ala Cys Gly Arg Lys Leu Ile Ser Leu Val Met Ala Val Cys Gly Asp
 1   5   10   15
Leu Cys Asn Xaa Xaa Xaa Gln Glu Gly Lys Asp Ile Ala Thr Glu Cys
                20   25   30
Cys Gly Asn Gln Cys Ser Asp Asp Tyr Ile Arg Ser Ala Cys
        35   40   45

<210> 128
<211> 46
<212> PRT
<213> Caenorhabditis elegans

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 128
Arg Cys Gly Arg Arg Ile His Ser Tyr Val Phe Ala Val Cys Gly Lys
 1   5   10   15
Ala Cys Glu Xaa Xaa Xaa Ser Thr Glu Val Asn Ile Ala Ser Lys Cys
                20   25   30
Cys Arg Glu Glu Cys Thr Asp Asp Phe Ile Arg Lys Gln Cys
        35   40   45

<210> 129
<211> 46
<212> PRT
<213> Caenorhabditis elegans

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 129
Arg Cys Gly Arg Lys Leu Tyr Thr Asp Val Leu Ser Ala Cys Asn Gly
 1   5   10   15
Pro Cys Glu Xaa Xaa Xaa Gly Thr Glu Gln Asp Leu Ser Lys Leu Cys
                20   25   30
Cys Gly Asn Gln Cys Thr Phe Asx Glu Ile Arg Lys Ala Cys
        35   40   45

<210> 130
<211> 46
<212> PRT

<213> Caenorhabditis elegans

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 130
Ile Cys Gly Thr Lys Asx Leu Lys Met Val Met Val Met Cys Gly Gly
1   5   10   15
Glu Cys Ser Xaa Xaa Xaa Ser Thr Asn Glu Asn Ile Ala Thr Glu Cys
            20   25   30
Cys Glu Lys Met Cys Thr Met Glu Asp Ile Thr Thr Lys Cys
        35   40   45

<210> 131
<211> 46
<212> PRT
<213> Caenorhabditis elegans

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 131
Leu Cys Gly Arg Arg Leu Ile Leu Phe Met Leu Ala Thr Cys Gly Glu
1   5   10   15
Cys Asp Thr Xaa Xaa Xaa Asp Ser Ser Glu Asp Leu Ser His Ile Cys
            20   25   30
Cys Ile Lys Gln Cys Asp Val Gln Asp Ile Ile Arg Val Cys
        35   40   45

<210> 132
<211> 46
<212> PRT
<213> Caenorhabditis elegans

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 132
Leu Cys Gly Ser His Leu Val Glu Ala Leu Tyr Leu Val Cys Gly Glu
1   5   10   15
Arg Gly Phe Xaa Xaa Xaa Leu Gln Lys Arg Gly Ile Val Glu Gln Cys
            20   25   30
Cys Thr Ser Ile Cys Ser Leu Tyr Gln Leu Glu Asn Tyr Cys
        35   40   45

<210> 133
<211> 46
<212> PRT
<213> Rabbit

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<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 133
Leu Cys Gly Ser His Leu Val Glu Ala Leu Tyr Leu Val Cys Gly Glu
 1   5   10   15
Arg Gly Phe Xaa Xaa Xaa Thr Pro Lys Ser Gly Ile Val Glu Gln Cys
            20   25   30
Cys Thr Ser Ile Cys Ser Leu Tyr Gln Leu Glu Asn Tyr Cys
         35   40   45

<210> 134
<211> 46
<212> PRT
<213> Xenopus laevis

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 134
Leu Cys Gly Ser His Leu Val Glu Ala Leu Tyr Leu Val Cys Gly Asp
 1   5   10   15
Arg Gly Phe Xaa Xaa Xaa Lys Met Lys Arg Gly Ile Val Glu Gln Cys
            20   25   30
Cys His Ser Thr Cys Ser Leu Phe Gln Leu Glu Ser Tyr Cys
         35   40   45

<210> 135
<211> 46
<212> PRT
<213> Xenopus laevis

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 135
Leu Cys Gly Ser His Leu Val Glu Ala Leu Tyr Leu Val Cys Gly Asp
 1   5   10   15
Arg Gly Phe Xaa Xaa Xaa Lys Met Lys Arg Gly Ile Val Glu Gln Cys
            20   25   30
Cys His Ser Thr Cys Ser Leu Phe Gln Leu Glu Asn Tyr Cys
         35   40   45

<210> 136
<211> 46
<212> PRT
<213> Alligator

<220>
<221> VARIANT

<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 136
Leu Cys Gly Ser His Leu Val Asp Ala Leu Tyr Leu Val Cys Gly Glu
 1   5   10   15
Arg Gly Phe Xaa Xaa Xaa Ser Pro Lys Gly Gly Ile Val Glu Gln Cys
            20   25   30
Cys His Asn Thr Cys Ser Leu Tyr Gln Leu Glu Asn Tyr Cys
        35   40   45

<210> 137
<211> 46
<212> PRT
<213> Elephant fish

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 137
Leu Cys Gly Ser His Leu Val Asp Ala Leu Tyr Phe Val Cys Gly Glu
 1   5   10   15
Arg Gly Phe Xaa Xaa Xaa Pro Lys Gln Ile Gly Ile Val Glu Gln Cys
            20   25   30
Cys His Asn Thr Cys Ser Leu Val Asn Leu Glu Gly Tyr Cys
        35   40   45

<210> 138
<211> 46
<212> PRT
<213> Bos taurus

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 138
Leu Cys Gly Ala Glu Leu Val Asp Ala Leu Gln Phe Val Cys Gly Asp
 1   5   10   15
Arg Gly Phe Xaa Xaa Xaa Ala Pro Gln Thr Gly Ile Val Asp Glu Cys
            20   25   30
Cys Phe Arg Ser Cys Asp Leu Arg Arg Leu Glu Met Tyr Cys
        35   40   45

<210> 139
<211> 46
<212> PRT
<213> Canis

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 139
Leu Cys Gly Ala Glu Leu Val Asp Ala Leu Gln Phe Val Cys Gly Asp
1   5   10   15
Arg Gly Phe Xaa Xaa Xaa Ala Pro Gln Thr Gly Ile Val Asp Glu Cys
            20   25   30
Cys Phe Arg Ser Cys Asp Leu Arg Arg Leu Glu Met Tyr Cys
        35   40   45

<210> 140
<211> 46
<212> PRT
<213> Horse

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 140
Leu Cys Gly Gly Glu Leu Val Asp Thr Leu Gln Phe Val Cys Gly Asp
1   5   10   15
Arg Gly Phe Xaa Xaa Xaa Arg Arg Ser Arg Gly Ile Val Glu Glu Cys
            20   25   30
Cys Phe Arg Ser Cys Asp Leu Ala Leu Leu Glu Thr Tyr Cys
        35   40   45

<210> 141
<211> 46
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 141
Leu Cys Gly Gly Glu Leu Val Asp Thr Leu Gln Phe Val Cys Gly Asp
1   5   10   15
Arg Gly Phe Xaa Xaa Xaa Arg Arg Ser Arg Gly Ile Val Glu Glu Cys
            20   25   30
Cys Phe Arg Ser Cys Asp Leu Ala Leu Leu Glu Thr Tyr Cys
        35   40   45

<210> 142
<211> 46
<212> PRT
<213> Amphioxus

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 142
Leu Cys Gly Ser Thr Leu Ala Asp Val Leu Ser Phe Val Cys Gly Asn

```
 1               5                  10                 15
Arg Gly Tyr Xaa Xaa Xaa Arg Arg Arg Gly Leu Val Glu Glu Cys
            20                 25                 30
Cys Tyr Asn Val Cys Asp Tyr Ser Gln Leu Glu Ser Tyr Cys
        35                 40                 45

        .

<210> 143
<211> 46
<212> PRT
<213> Locust

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 143
Tyr Cys Gly Glu Lys Leu Ser Asn Ala Leu Lys Leu Val Cys Arg Gly
 1               5                  10                 15
Asn Tyr Asn Xaa Xaa Xaa Arg Arg Thr Arg Gly Val Phe Asp Glu Cys
            20                 25                 30
Cys Arg Lys Ser Cys Ser Ile Ser Glu Leu Gln Thr Tyr Cys
        35                 40                 45

<210> 144
<211> 46
<212> PRT
<213> Bommo

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 144
Tyr Cys Gly Arg His Leu Ala Arg Thr Leu Ala Asp Leu Cys Trp Glu
 1               5                  10                 15
Ala Gly Val Xaa Xaa Xaa Arg Gly Lys Arg Gly Ile Val Asp Glu Cys
            20                 25                 30
Cys Leu Arg Pro Cys Ser Val Asp Val Leu Leu Ser Tyr Cys
        35                 40                 45

<210> 145
<211> 46
<212> PRT
<213> Bommo

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 145
Tyr Cys Gly Arg His Leu Ala Asp Thr Leu Ala Asp Leu Cys Phe Gly
 1               5                  10                 15
Val Glu Lys Xaa Xaa Xaa Arg Gly Lys Arg Gly Val Val Asp Glu Cys
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                 20                      25                      30
Cys Phe Arg Pro Cys Thr Leu Asp Val Leu Leu Ser Tyr Cys
        35                      40                      45


<210> 146
<211> 46
<212> PRT
<213> Horn worm

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 146
Ile Cys Gly Arg His Leu Ala Arg Thr Leu Ala Asp Leu Cys Pro Asn
 1               5                      10                      15
Val Glu Tyr Xaa Xaa Xaa Gly Lys Arg Ala Gly Val Ala Asp Asp Cys
            20                      25                      30
Cys Asx Asn Ser Cys Thr Met Asp Val Leu Leu Ser Tyr Cys
        35                      40                      45


<210> 147
<211> 46
<212> PRT
<213> Bombyx mori

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 147
Tyr Cys Gly Arg Arg Leu Ala Thr Met Leu Ser Phe Val Cys Asp Asn
 1               5                      10                      15
Gln Tyr Gln Xaa Xaa Xaa Gly Lys Arg Gln Gly Ile Ala Glu Glu Cys
            20                      25                      30
Cys Asn Lys Pro Cys Thr Glu Asn Glu Leu Leu Gly Tyr Cys
        35                      40                      45


<210> 148
<211> 46
<212> PRT
<213> Bombyx mori

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 148
Tyr Cys Gly Arg Arg Leu Ala Thr Met Leu Leu Tyr Val Cys Asp Asn
 1               5                      10                      15
Gln Tyr Gln Xaa Xaa Xaa Gly Lys Arg Gln Gly Ile Val Glu Glu Cys
            20                      25                      30
Cys Asn Lys Pro Cys Thr Glu Asn Glu Leu Leu Gly Tyr Cys
```

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<210> 149
<211> 46
<212> PRT
<213> Bombys mori

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 149
Tyr Cys Gly Arg Arg Leu Ala Ile Met Leu Ser Tyr Leu Cys Asp Asn
1   5   10   15
Gln Tyr Leu Xaa Xaa Xaa Gly Lys Arg Gln Gly Ile Ala Glu Glu Cys
            20   25   30
Cys Asn Lys Pro Cys Thr Glu Asp Glu Leu Leu Gly Tyr Cys
        35   40   45

<210> 150
<211> 46
<212> PRT
<213> Caenorhabditis elegans

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 150
Leu Cys Gly Ser Arg Leu Thr Thr Thr Leu Leu Ala Val Cys Arg Asn
1   5   10   15
Gln Leu Cys Xaa Xaa Xaa Gln Lys Arg Gly Gly Ile Ala Thr Glu Cys
            20   25   30
Cys Glu Lys Arg Cys Ser Phe Ala Tyr Leu Lys Thr Phe Cys
        35   40   45

<210> 151
<211> 46
<212> PRT
<213> Moi 3

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 151
Leu Cys Gly Ser Thr Leu Ala Asn Met Val Gln Trp Leu Cys Ser Thr
1   5   10   15
Tyr Thr Thr Xaa Xaa Xaa Glu Ser Arg Pro Ser Ile Val Cys Glu Cys
            20   25   30
Cys Phe Asn Gln Cys Thr Val Gln Glu Leu Leu Ala Tyr Cys
        35   40   45

<210> 152
<211> 46
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 152
Leu Cys Gly Arg Glu Leu Val Arg Ala Gln Ile Ala Ile Cys Gly Met
1   5   10   15
Ser Thr Trp Xaa Xaa Xaa Arg Pro Tyr Val Ala Leu Phe Glu Lys Cys
            20   25   30
Cys Leu Ile Gly Cys Thr Lys Arg Ser Leu Ala Lys Tyr Cys
        35   40   45

<210> 153
<211> 46
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> (1)...(46)
<223> Xaa = Any Amino Acid

<400> 153
Leu Cys Gly His His Phe Val Arg Ala Leu Val Arg Val Cys Gly Gly
1   5   10   15
Pro Arg Trp Xaa Xaa Xaa Ala Ala Ala Thr Asn Pro Ala Arg Tyr Cys
            20   25   30
Cys Leu Ser Gly Cys Thr Gln Gln Asp Leu Leu Thr Leu Cys
        35   40   45

<210> 154
<211> 541
<212> PRT
<213> Caenorhabditis elegans

<400> 154
Met Ser Met Thr Ser Leu Ser Thr Lys Ser Arg Arg Gln Glu Asp Val
1   5   10   15
Val Ile Glu Gly Trp Leu His Lys Lys Gly Glu His Ile Arg Asn Trp
            20   25   30
Arg Pro Arg Tyr Phe Met Ile Phe Asn Asp Gly Ala Leu Leu Gly Phe
        35   40   45
Arg Ala Lys Pro Lys Glu Gly Gln Pro Phe Pro Glu Pro Leu Asn Asp
    50   55   60
Phe Met Ile Lys Asp Ala Ala Thr Met Leu Phe Glu Lys Pro Arg Pro
65   70   75   80
Asn Met Phe Met Val Arg Cys Leu Gln Trp Thr Thr Val Ile Glu Arg
                85   90   95
Thr Phe Tyr Ala Glu Ser Ala Glu Val Arg Gln Arg Trp Ile His Ala
            100   105   110
Ile Glu Ser Ile Ser Lys Lys Tyr Lys Gly Thr Asn Ala Asn Pro Gln

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              115                    120                    125
Glu Glu Leu Met Glu Thr Asn Gln Gln Pro Lys Ile Asp Glu Asp Ser
    130                    135                    140
Glu Phe Ala Gly Ala Ala His Ala Ile Met Gly Gln Pro Ser Ser Gly
145                    150                    155                    160
His Gly Asp Asn Cys Ser Ile Asp Phe Arg Ala Ser Met Ile Ser Ile
                   165                    170                    175
Ala Asp Thr Ser Glu Ala Ala Lys Arg Asp Lys Ile Thr Met Glu Asp
              180                    185                    190
Phe Asp Phe Leu Lys Val Leu Gly Lys Gly Thr Phe Gly Lys Val Ile
              195                    200                    205
Leu Cys Lys Glu Lys Arg Thr Gln Lys Leu Tyr Ala Ile Lys Ile Leu
    210                    215                    220
Lys Lys Asp Val Ile Ile Ala Arg Glu Glu Val Ala His Thr Leu Thr
225                    230                    235                    240
Glu Asn Arg Val Leu Gln Arg Cys Lys His Pro Phe Leu Thr Glu Leu
                   245                    250                    255
Lys Tyr Ser Phe Gln Glu Gln His Tyr Leu Cys Phe Val Met Gln Phe
              260                    265                    270
Ala Asn Gly Gly Glu Leu Phe Thr His Val Arg Lys Cys Gly Thr Phe
              275                    280                    285
Ser Glu Pro Arg Ala Arg Phe Tyr Gly Ala Glu Ile Val Leu Ala Leu
    290                    295                    300
Gly Tyr Leu His Arg Cys Asp Ile Val Tyr Arg Asp Met Lys Leu Glu
305                    310                    315                    320
Asn Leu Leu Leu Asp Lys Asp Gly His Ile Lys Ile Ala Asp Phe Gly
                   325                    330                    335
Leu Cys Lys Glu Glu Ile Ser Phe Gly Asp Lys Thr Ser Thr Phe Cys
              340                    345                    350
Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val Leu Asp Asp His Asp Tyr
              355                    360                    365
Gly Arg Cys Val Asp Trp Trp Gly Val Gly Val Val Met Tyr Glu Met
    370                    375                    380
Met Cys Gly Arg Leu Pro Phe Tyr Ser Lys Asp His Asn Lys Leu Phe
385                    390                    395                    400
Glu Leu Ile Met Ala Gly Asp Leu Arg Phe Pro Ser Lys Leu Ser Gln
                   405                    410                    415
Glu Ala Arg Thr Leu Leu Thr Gly Leu Leu Val Lys Asp Pro Thr Gln
              420                    425                    430
Arg Leu Gly Gly Gly Pro Glu Asp Ala Leu Glu Ile Cys Arg Ala Asp
              435                    440                    445
Phe Phe Arg Thr Val Asp Trp Glu Ala Thr Tyr Arg Lys Glu Ile Glu
    450                    455                    460
Pro Pro Tyr Lys Pro Asn Val Gln Ser Glu Thr Asp Thr Ser Tyr Phe
465                    470                    475                    480
Asp Asn Glu Phe Thr Ser Gln Pro Val Gln Leu Thr Pro Pro Ser Arg
                   485                    490                    495
Ser Gly Ala Leu Ala Thr Val Asp Glu Gln Glu Glu Met Gln Ser Asn
              500                    505                    510
Phe Thr Gln Phe Ser Phe His Asn Val Met Gly Ser Ile Asn Arg Ile
              515                    520                    525
His Glu Ala Ser Glu Asp Asn Glu Asp Tyr Asp Met Gly
    530                    535                    540
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<210> 155
<211> 546
<212> PRT
<213> Caenorhabditis elegans

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<400> 155
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Met Ser Met Thr Ser Leu Ser Thr Lys Ser Arg Arg Gln Glu Asp Val
 1           5                   10              15
Val Ile Glu Gly Trp Leu His Lys Lys Gly Glu His Ile Arg Asn Trp
          20                  25                  30
Arg Pro Arg Tyr Phe Met Ile Phe Asn Asp Gly Ala Leu Leu Gly Phe
          35              40                  45
Arg Ala Lys Pro Lys Glu Gly Gln Pro Phe Pro Glu Pro Leu Asn Asp
    50              55                  60
Phe Met Ile Lys Asp Ala Ala Thr Met Leu Phe Glu Lys Pro Arg Pro
65                  70                  75                  80
Asn Met Phe Met Val Arg Cys Leu Gln Trp Thr Thr Val Ile Glu Arg
              85                  90                  95
Thr Phe Tyr Ala Glu Ser Ala Glu Val Arg Gln Arg Trp Ile His Ala
          100                 105                 110
Ile Glu Ser Ile Ser Lys Lys Tyr Lys Gly Thr Asn Ala Asn Pro Gln
          115                 120                 125
Glu Glu Leu Met Glu Thr Asn Gln Gln Pro Lys Ile Asp Glu Asp Ser
    130                 135                 140
Glu Phe Ala Gly Ala Ala His Ala Ile Met Gly Gln Pro Ser Ser Gly
145                 150                 155                 160
His Gly Asp Asn Cys Ser Ile Asp Phe Arg Ala Ser Met Ile Ser Ile
              165                 170                 175
Ala Asp Thr Ser Glu Ala Ala Lys Arg Asp Lys Ile Thr Met Glu Asp
          180                 185                 190
Phe Asp Phe Leu Lys Val Leu Gly Lys Gly Thr Phe Gly Lys Val Ile
          195                 200                 205
Leu Cys Lys Glu Lys Arg Thr Gln Lys Leu Tyr Ala Ile Lys Ile Leu
    210                 215                 220
Lys Lys Asp Val Ile Ile Ala Arg Glu Glu Val Ala His Thr Leu Thr
225                 230                 235                 240
Glu Asn Arg Val Leu Gln Arg Cys Lys His Pro Phe Leu Thr Glu Leu
              245                 250                 255
Lys Tyr Ser Phe Gln Thr Asn Asp Arg Leu Cys Phe Val Met Glu Phe
          260                 265                 270
Ala Ile Gly Gly Asp Leu Tyr Tyr His Leu Asn Arg Glu Val Gln Met
          275                 280                 285
Asn Lys Glu Gly Phe Ser Glu Pro Arg Ala Arg Phe Tyr Gly Ser Glu
          290                 295                 300
Ile Val Leu Ala Leu Gly Tyr Leu His Ala Asn Ser Ile Val Tyr Arg
305                 310                 315                 320
Asp Leu Lys Leu Glu Asn Leu Leu Leu Asp Lys Asp Gly His Ile Lys
              325                 330                 335
Ile Ala Asp Phe Gly Leu Cys Lys Glu Glu Ile Ser Phe Gly Asp Lys
              340                 345                 350
Thr Ser Thr Phe Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val Leu
          355                 360                 365
Asp Asp His Asp Tyr Gly Arg Cys Val Asp Trp Trp Gly Val Gly Val
    370                 375                 380
Val Met Tyr Glu Met Met Cys Gly Arg Leu Pro Phe Tyr Ser Lys Asp
385                 390                 395                 400
His Asn Lys Leu Phe Glu Leu Ile Met Ala Gly Asp Leu Arg Phe Pro
              405                 410                 415
Ser Lys Leu Ser Gln Glu Ala Arg Thr Leu Leu Thr Gly Leu Leu Val
          420                 425                 430
Lys Asp Pro Thr Gln Arg Leu Gly Gly Gly Pro Glu Asp Ala Leu Glu
          435                 440                 445
Ile Cys Arg Ala Asp Phe Phe Arg Thr Val Asp Trp Glu Ala Thr Tyr
    450                 455                 460
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Arg Lys Glu Ile Glu Pro Pro Tyr Lys Pro Asn Val Gln Ser Glu Thr
465   470   475   480
Asp Thr Ser Tyr Phe Asp Asn Glu Phe Thr Ser Gln Pro Val Gln Leu
                485   490   495
Thr Pro Pro Ser Arg Ser Gly Ala Leu Ala Thr Val Asp Glu Gln Glu
            500   505   510
Glu Met Gln Ser Asn Phe Thr Gln Phe Ser Phe His Asn Val Met Gly
        515   520   525
Ser Ile Asn Arg Ile His Glu Ala Ser Glu Asp Asn Glu Asp Tyr Asp
        530   535   540
Met Gly
545

<210> 156
<211> 483
<212> PRT
<213> Caenorhabditis elegans

<400> 156
Met Ser Thr Glu Asn Ala His Leu Gln Lys Glu Asp Ile Val Ile Glu
 1   5   10   15
Ser Trp Leu His Lys Lys Gly Glu His Ile Arg Asn Trp Arg Pro Arg
                20   25   30
Tyr Phe Ile Leu Phe Arg Asp Gly Thr Leu Leu Gly Phe Arg Ser Lys
            35   40   45
Pro Lys Glu Asp Gln Pro Leu Pro Glu Pro Leu Asn Asn Phe Met Ile
        50   55   60
Arg Asp Ala Ala Thr Val Cys Leu Asp Lys Pro Arg Pro Asn Met Phe
65   70   75   80
Ile Val Arg Cys Leu Gln Trp Thr Thr Val Ile Glu Arg Thr Phe Tyr
                85   90   95
Ala Asp Ser Ala Asp Phe Arg Gln Met Trp Ile Glu Ala Ile Gln Ala
            100   105   110
Val Ser Ser His Asn Arg Leu Lys Glu Asn Ala Gly Asn Thr Ser Met
        115   120   125
Gln Glu Glu Asp Thr Asn Gly Asn Pro Ser Gly Glu Ser Asp Val Asn
        130   135   140
Met Asp Ala Thr Ser Thr Arg Ser Asp Asn Asp Phe Glu Ser Thr Val
145   150   155   160
Met Asn Ile Asp Glu Pro Glu Glu Val Pro Arg Lys Asn Thr Val Thr
                165   170   175
Met Asp Asp Phe Asp Phe Leu Lys Val Leu Gly Gln Gly Thr Phe Gly
            180   185   190
Lys Val Ile Leu Cys Arg Glu Lys Ser Ser Asp Lys Leu Tyr Ala Ile
        195   200   205
Lys Ile Ile Arg Lys Glu Met Val Val Asp Arg Ser Glu Val Ala His
        210   215   220
Thr Leu Thr Glu Asn Arg Val Leu Tyr Ala Cys Val His Pro Phe Leu
225   230   235   240
Thr Leu Leu Lys Tyr Ser Phe Gln Ala Gln Tyr His Ile Cys Phe Val
                245   250   255
Met Glu Phe Ala Asn Gly Gly Glu Leu Phe Thr His Leu Gln Arg Cys
            260   265   270
Lys Thr Phe Ser Glu Ala Arg Thr Arg Phe Tyr Gly Ser Glu Ile Ile
        275   280   285
Leu Ala Leu Gly Tyr Leu His His Arg Asn Ile Val Tyr Arg Asp Met
        290   295   300
Lys Leu Glu Asn Leu Leu Leu Asp Arg Asp Gly His Ile Lys Ile Thr

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305                     310                     315                     320
Asp Phe Gly Leu Cys Lys Glu Glu Ile Lys Tyr Gly Asp Lys Thr Ser
                325                     330                     335
Thr Phe Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val Ile Glu Asp
            340                     345                     350
Ile Asp Tyr Asp Arg Ser Val Asp Trp Trp Gly Val Gly Val Val Met
            355                     360                     365
Tyr Glu Met Met Cys Gly Arg Leu Pro Phe Ser Ala Lys Glu Asn Gly
        370                     375                     380
Lys Leu Phe Glu Leu Ile Thr Thr Cys Asp Leu Lys Phe Pro Asn Arg
385                     390                     395                     400
Leu Ser Pro Glu Ala Val Thr Leu Leu Ser Gly Leu Leu Glu Arg Val
                405                     410                     415
Pro Ala Lys Arg Leu Gly Ala Gly Pro Asp Asp Ala Arg Glu Val Ser
                420                     425                     430
Arg Ala Glu Phe Phe Lys Asp Val Asp Trp Glu Ala Thr Leu Arg Lys
                435                     440                     445
Glu Val Glu Pro Pro Phe Lys Pro Asn Val Met Ser Glu Thr Asp Thr
            450                     455                     460
Ser Phe Phe Asp Arg Val Arg Tyr Val Ser Ile Leu Leu Lys Val Ser
465                     470                     475                     480
Glu Ala Ile




<210> 157
<211> 480
<212> PRT
<213> Homo sapiens

<400> 157
Met Ser Asp Val Ala Ile Val Lys Glu Gly Trp Leu His Lys Arg Gly
 1               5                       10                      15
Glu Tyr Ile Lys Thr Trp Arg Pro Arg Tyr Phe Leu Leu Lys Asn Asp
            20                      25                      30
Gly Thr Phe Ile Gly Tyr Lys Glu Arg Pro Gln Val Asp Val Gln Arg
            35                      40                      45
Glu Ala Pro Leu Asn Asn Phe Ser Val Ala Gln Cys Gln Leu Met Lys
        50                      55                      60
Thr Glu Arg Pro Arg Pro Asn Thr Phe Ile Ile Arg Cys Leu Gln Trp
65                      70                      75                      80
Thr Thr Val Ile Glu Arg Thr Phe His Val Glu Thr Pro Glu Glu Arg
                85                      90                      95
Glu Glu Trp Thr Thr Ala Ile Gln Thr Val Ala Asp Gly Leu Lys Lys
            100                     105                     110
Gln Glu Glu Glu Glu Met Asp Phe Arg Ser Gly Ser Pro Ser Asp Asn
            115                     120                     125
Ser Gly Ala Glu Glu Met Glu Val Ser Leu Ala Lys Pro Lys His Arg
        130                     135                     140
Val Thr Met Asn Glu Phe Glu Tyr Leu Lys Leu Leu Gly Lys Gly Thr
145                     150                     155                     160
Phe Gly Lys Val Ile Leu Val Lys Glu Lys Ala Thr Gly Arg Tyr Tyr
                165                     170                     175
Ala Met Lys Ile Leu Lys Lys Glu Val Ile Val Ala Lys Asp Glu Val
            180                     185                     190
Ala His Thr Leu Thr Glu Asn Arg Val Leu Gln Asn Ser Arg His Pro
        195                     200                     205
Phe Leu Thr Ala Leu Lys Tyr Ser Phe Gln Thr His Asp Arg Leu Cys
        210                     215                     220
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Phe Val Met Glu Tyr Ala Asn Gly Gly Glu Leu Phe Phe His Leu Ser
225                 230                 235                 240
Arg Glu Arg Val Phe Ser Glu Asp Phe Ala Phe Arg Tyr Gly Ala Glu
                245                 250                 255
Ile Val Ser Ala Leu Asp Tyr Leu His Ser Glu Lys Asn Val Val Tyr
                260                 265                 270
Arg Asp Leu Lys Leu Glu Asn Leu Met Leu Asp Lys Asp Gly His Ile
            275                 280                 285
Lys Ile Thr Asp Phe Gly Leu Cys Lys Glu Gly Ile Lys Asp Gly Ala
        290                 295                 300
Thr Met Lys Thr Phe Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val
305                 310                 315                 320
Leu Glu Asp Asn Asp Tyr Gly Arg Ala Val Asp Trp Trp Gly Leu Gly
                325                 330                 335
Val Val Met Tyr Glu Met Met Cys Gly Arg Leu Pro Phe Tyr Asn Gln
            340                 345                 350
Asp His Glu Lys Leu Phe Glu Leu Ile Leu Met Glu Glu Ile Arg Phe
        355                 360                 365
Pro Arg Thr Leu Gly Pro Glu Ala Lys Ser Leu Leu Ser Gly Leu Leu
    370                 375                 380
Lys Lys Asp Pro Lys Gln Arg Leu Gly Gly Gly Ser Glu Asp Ala Lys
385                 390                 395                 400
Glu Ile Met Gln His Arg Phe Phe Ala Gly Ile Val Trp Gln His Val
            405                 410                 415
Tyr Glu Lys Lys Leu Ser Pro Pro Phe Lys Pro Gln Val Thr Ser Glu
        420                 425                 430
Thr Asp Thr Arg Tyr Phe Asp Glu Glu Phe Thr Ala Gln Met Ile Thr
        435                 440                 445
Ile Thr Pro Pro Asp Gln Asp Asp Ser Met Glu Cys Val Asp Ser Glu
    450                 455                 460
Arg Arg Pro His Phe Pro Gln Phe Ser Tyr Ser Ala Ser Ser Thr Ala
465                 470                 475                 480
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<210> 158
<211> 6250
<212> DNA
<213> Caenorhabditis elegans

<400> 158
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acaccaacta acacgtcgct cgacaccaca actactaaca atgacacgac atcggatcgt     120
gaagcggcgc caacggtgag gaactagttt ctagacgaac atcggaatgc ggcttaaagt     180
tcgggtgcac ttatcaaact agacccgttt tttagaccct cttcaaagc ggggaactgc      240
aatacacttt ttgaacctaa aacctagatt tttggtgttc taaattcttt tgtgaattgg     300
agagccaatt caaccggaaa actctttttt atagggaaaa cgttttgcca cgtagcagat     360
aagttaaata gaaaatattt taaaatattt ttttttgtct aggaaaaatt gataaagcac     420
ctggtccaat tttcagaacg ttccaatttt acctacaata caaaattggc cggcaagctt     480
atggcttctg tttgcctact tctagcttga acattctaag gctccgtagc gaaaaaaatt     540
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acgctctaaa acttgaattt gaaaatttgc agttgatgct taatataaa agttttgagg      660
tttcacctgc ctaagatcgt tttagcataa atatgtagat gaccgagagt atacaattaa     720
atattaatta aatatgaatt cgaaatatg aatttтggtt gacttccatt atgttttttt      780
tttcacattt tacaactatt ctaggcaaaa atgaaaaaaa aaaacttgta gaataatttt     840
caaaatttta ttttccagac gctcaactta acaccaacag caagtgaatc ggagaacagc     900
ttatccccag tcaccgccga agatctcata gctaaaagca ttaaagaagg atgtccgaag     960
agaacttcca acgacttcat gtttcttcag agtatgggcg aaggagccta cagccaggtt    1020
ggtgaacgag gaaatttcca gaaatgtgtg caactagtat cagagtacaa ggaaaagctt    1080
ggaaaatact cggaatgcct gaattagtgc ttgaagtaag cttgcccatt ttttтcggaa    1140
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catcggtgat tctttcttgg caattcaact gatagtactg gtattaccta gccgcaaaaa    1200
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tgagttttta tcgattttta tagctttttt tacttatgta tattcaaaat gtatgtgttt    1320
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ttttactgta agttatcatc attttggcac cgaaaggttt tttaggtaa ttttaccact    1620
gaccgtaaca cttttccaat ggcgtataca atttgaattt agcaacaaaa caaaaaaaaa    1680
caaaaatcgt accaagacgg actactgtat tttttggcgg aaaaatcggc caattttgcg    1740
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gaagaagatg cagaaaacga cgacatcgtc atagaattgt ctacacaaac ctagtgttct    1920
gcgtctctta cacaaaataa gccacgcgtc tagcactatc aacattcgca aacagctata    1980
catgtgcttg ttgaagggaa aaacgagacg tttgtgtgta ttggggaggg gtaatgtaac    2040
cgtggttgtt gggttcatca aattgacagc gcacagggat ttgattttga acgtgttatc    2100
gctttggacc ctgaggcatg tttcctacac ctagaacaac taccgtaatg aatctttaca    2160
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aactgtaagt tgaacgaatt tacaataaaa aacacagctg cactgaccaa aaaacaatta    2760
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gatcttcgga ttctggatcg ccgccgccaa ctcgattcta ttcggatgag gagggtaagg    3720
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cgacatttgg ggattgggat gtatcctttt ccagtgtcta gccggacagc caccattcag    3960
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aggatttcca gaggaagcgt cggaaattat cgcaaagatt ttggtaggtt gacatgaaac    4080
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tatcaagcca ccagtcctgc acgcctacat tccagccaca tttggcgagc cggagtacta    4260
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cagtttgcac tgaccacctc ttcatttgca ctgaccacct cttcatttgc actgaccaac    4560
ttttcatttg cactgaccat ctcttcattt gcactgacca acttttcatt tgcaattctg    4620
gcaatgattc ttttgcatct actgatcaaa aattgattca aatcaattaa ttttctttga    4680
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ttcggaaatt gcaccgtgag tgatttgcac ctaattggtt atttttaata atcattaaat    4860
tatagacgcg ccaattcgga agccgaaaag aaccgcgccg cacgtgcgca gaagctcgaa    4920
gagcaacgtg tcaaaaaccc attccacatc ttcaccaaca actcgctcat tttgaaacaa    4980
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acgccgtgca tgcaggtgga gctaaaaaac tcgggaactt tctttataca tacggtaggt    5160
cagaataatc atagctgtct atctcattat agtactcaat gaatctgaaa atttcaaatt    5220
ttcagcccaa ccgcgtctac tacttgtttg atctcgaaaa gaaagcagat gagtggtgta    5280
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cgatgcgtga cggaacattt ggcagcattt atggaaagaa aaagtccaga aaggtatgaa    5400
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tgccaatttt cattagactt tagagcctat tgctattttg tggacaggtt taaacatttt    5520
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aaattctgtt ctcaaaattg gattttttaca gagcttgttt cgagatttca taatccttca    5640
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taaaggttct ttattttcca tgcaactcta aaatcttccc gtatattttt ttggaaagtc    5820
ttatgatgtt tagacggttt aaattttttg atgatttaaa tttttaggg gtggtctata    5880
attttggacc accctgtata attatggacc accatgtaca cttatagacc acccagtaac    5940
aagcattttt ggaccaccac gcaaatctta ttattatgga ccacccaaac ttagaacacc    6000
ttcaatactt cttttctgtt caaaaaatga tcaacttgct gaaaaaaaat ttttgtagg    6060
aaatgatgcg tgaacagaag gcgctgcgcc gcaaacaaga aaaggaggag aaaaaggcgc    6120
taaaagccga gcaagtgagc aagaagcttt caatgcaaat ggacaagaag tcgccttgaa    6180
ggctcacctc ccttctactc cccacaaaat caccatcaaa caaatcacac ttttgtatca    6240
ttttgcgtcc                                                          6250
```


<210> 159
<211> 632
<212> PRT
<213> Caenorhabditis elegans

<400> 159

```
Met Glu Asp Leu Thr Pro Thr Asn Thr Ser Leu Asp Thr Thr Thr Thr
1               5                   10                  15
Asn Asn Asp Thr Thr Ser Asp Arg Glu Ala Ala Pro Thr Thr Leu Asn
            20                  25                  30
Leu Thr Pro Thr Ala Ser Glu Ser Glu Asn Ser Leu Ser Pro Val Thr
        35                  40                  45
Ala Glu Asp Leu Ile Ala Lys Ser Ile Lys Glu Gly Cys Pro Lys Arg
    50                  55                  60
Thr Ser Asn Asp Phe Met Phe Leu Gln Ser Met Gly Glu Gly Ala Tyr
65                  70                  75                  80
Ser Gln Val Phe Arg Cys Arg Glu Val Ala Thr Asp Ala Met Phe Ala
                85                  90                  95
Val Lys Val Leu Gln Lys Ser Tyr Leu Asn Arg His Gln Lys Met Asp
            100                 105                 110
Ala Ile Ile Arg Glu Lys Asn Ile Leu Thr Tyr Leu Ser Gln Glu Cys
        115                 120                 125
Gly Gly His Pro Phe Val Thr Gln Leu Tyr Thr His Phe His Asp Gln
    130                 135                 140
Ala Arg Ile Tyr Phe Val Ile Gly Leu Val Glu Asn Gly Asp Leu Gly
145                 150                 155                 160
Glu Ser Leu Cys His Phe Gly Ser Phe Asp Met Leu Thr Ser Lys Phe
                165                 170                 175
Phe Ala Ser Glu Ile Leu Thr Gly Leu Gln Phe Leu His Asp Asn Lys
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                 180                        185                          190
Ile Val His Arg Asp Met Lys Pro Asp Asn Val Leu Ile Gln Lys Asp
        195             200                     205
Gly His Ile Leu Ile Thr Asp Phe Gly Ser Ala Gln Ala Phe Gly Gly
    210                 215                     220
Leu Gln Leu Ser Gln Glu Gly Phe Thr Asp Ala Asn Gln Ala Ser Ser
225                     230                 235                     240
Arg Ser Ser Asp Ser Gly Ser Pro Pro Pro Thr Arg Phe Tyr Ser Asp
                245                 250                     255
Glu Glu Glu Glu Asn Thr Ala Arg Arg Thr Thr Phe Val Gly Thr Ala
                260                 265                     270
Leu Tyr Val Ser Pro Glu Met Leu Ala Asp Gly Asp Val Gly Pro Gln
    275                 280                     285
Thr Asp Ile Trp Gly Leu Gly Cys Ile Leu Phe Gln Cys Leu Ala Gly
    290                 295                     300
Gln Pro Pro Phe Arg Ala Val Asn Gln Tyr His Leu Leu Lys Arg Ile
305                     310                 315                     320
Gln Glu Leu Asp Phe Ser Phe Pro Glu Gly Phe Pro Glu Glu Ala Ser
                325                 330                     335
Glu Ile Ile Ala Lys Ile Leu Val Arg Asp Pro Ser Thr Arg Ile Thr
                340                 345                     350
Ser Gln Glu Leu Met Ala His Lys Phe Phe Glu Asn Val Asp Trp Val
    355                 360                     365
Asn Ile Ala Asn Ile Lys Pro Pro Val Leu His Ala Tyr Ile Pro Ala
    370                 375                     380
Thr Phe Gly Glu Pro Glu Tyr Tyr Ser Asn Ile Gly Pro Val Glu Pro
385                     390                 395                     400
Gly Leu Asp Asp Arg Ala Leu Phe Arg Leu Met Asn Leu Gly Asn Asp
                405                 410                     415
Ala Ser Ala Ser Gln Pro Ser Thr Pro Ser Asn Val Glu His Arg Gly
                420                 425                     430
Asp Pro Phe Val Ser Glu Ile Ala Pro Arg Ala Asn Ser Glu Ala Glu
                435                 440                     445
Lys Asn Arg Ala Ala Arg Ala Gln Lys Leu Glu Glu Gln Arg Val Lys
    450                 455                     460
Asn Pro Phe His Ile Phe Thr Asn Asn Ser Leu Ile Leu Lys Gln Gly
465                     470                 475                     480
Tyr Leu Glu Lys Lys Arg Gly Leu Phe Ala Arg Arg Arg Met Phe Leu
                485                 490                     495
Leu Thr Glu Gly Pro His Leu Leu Tyr Ile Asp Val Pro Asn Leu Val
                500                 505                     510
Leu Lys Gly Glu Val Pro Trp Thr Pro Cys Met Gln Val Glu Leu Lys
    515                 520                     525
Asn Ser Gly Thr Phe Phe Ile His Thr Pro Asn Arg Val Tyr Tyr Leu
    530                 535                     540
Phe Asp Leu Glu Lys Lys Ala Asp Glu Trp Cys Lys Ala Ile Asn Asp
545                     550                 555                     560
Val Arg Lys Arg Tyr Ser Val Thr Ile Glu Lys Thr Phe Asn Ser Ala
                565                 570                     575
Met Arg Asp Gly Thr Phe Gly Ser Ile Tyr Gly Lys Lys Lys Ser Arg
                580                 585                     590
Lys Glu Met Met Arg Glu Gln Lys Ala Leu Arg Arg Lys Gln Glu Lys
    595                 600                     605
Glu Glu Lys Lys Ala Leu Lys Ala Glu Gln Val Ser Lys Lys Leu Ser
    610                 615                     620
Met Gln Met Asp Lys Lys Ser Pro
625                 630
```

<210> 160
<211> 636
<212> PRT
<213> Caenorhabditis elegans

<400> 160
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Met Glu Asp Leu Thr Pro Thr Asn Thr Ser Leu Asp Thr Thr Thr Thr
 1               5                  10                  15
Asn Asn Asp Thr Thr Ser Asp Arg Glu Ala Ala Pro Thr Thr Leu Asn
            20                  25                  30
Leu Thr Pro Thr Ala Ser Glu Ser Glu Asn Ser Leu Ser Pro Val Thr
            35                  40                  45
Ala Glu Asp Leu Ile Ala Lys Ser Ile Lys Glu Gly Cys Pro Lys Arg
        50                  55                  60
Thr Ser Asn Asp Phe Met Phe Leu Gln Ser Met Gly Glu Gly Ala Tyr
65                  70                  75                  80
Ser Gln Val Phe Arg Cys Arg Glu Val Ala Thr Asp Ala Met Phe Ala
                85                  90                  95
Val Lys Val Leu Gln Lys Ser Tyr Leu Asn Arg His Gln Lys Met Asp
            100                 105                 110
Ala Ile Ile Arg Glu Lys Asn Ile Leu Thr Tyr Leu Ser Gln Glu Cys
            115                 120                 125
Gly Gly His Pro Phe Val Thr Gln Leu Tyr Thr His Phe His Asp Gln
        130                 135                 140
Ala Arg Ile Tyr Phe Val Ile Gly Leu Val Glu Asn Gly Asp Leu Gly
145                 150                 155                 160
Glu Ser Leu Cys His Phe Gly Ser Phe Asp Met Leu Thr Ser Lys Phe
                165                 170                 175
Phe Ala Ser Glu Ile Leu Thr Gly Leu Gln Phe Leu His Asp Asn Lys
            180                 185                 190
Ile Val His Arg Asp Met Lys Pro Asp Asn Val Leu Ile Gln Lys Asp
            195                 200                 205
Gly His Ile Leu Ile Thr Asp Phe Gly Ser Ala Gln Ala Phe Gly Gly
        210                 215                 220
Leu Gln Leu Ser Gln Glu Gly Phe Thr Asp Ala Asn Gln Ala Ser Ser
225                 230                 235                 240
Arg Ser Ser Asp Ser Gly Ser Pro Pro Thr Arg Phe Tyr Ser Asp
                245                 250                 255
Glu Glu Val Pro Glu Glu Asn Thr Ala Arg Arg Thr Thr Phe Val Gly
            260                 265                 270
Thr Ala Leu Tyr Val Ser Pro Glu Met Leu Ala Asp Gly Asp Val Gly
            275                 280                 285
Pro Gln Thr Asp Ile Trp Gly Leu Gly Cys Ile Leu Phe Gln Cys Leu
        290                 295                 300
Ala Gly Gln Pro Pro Phe Arg Ala Val Asn Gln Tyr His Leu Leu Lys
305                 310                 315                 320
Arg Ile Gln Glu Leu Asp Phe Ser Phe Pro Glu Gly Phe Pro Glu Glu
            325                 330                 335
Ala Ser Glu Ile Ile Ala Lys Ile Leu Val Arg Asp Pro Ser Thr Arg
            340                 345                 350
Ile Thr Ser Gln Glu Leu Met Ala His Lys Phe Phe Glu Asn Val Asp
            355                 360                 365
Trp Val Asn Ile Ala Asn Ile Lys Pro Pro Val Leu His Ala Tyr Ile
        370                 375                 380
Pro Ala Thr Phe Gly Glu Pro Glu Tyr Tyr Ser Asn Ile Gly Pro Val
385                 390                 395                 400
Glu Pro Gly Leu Asp Asp Arg Ala Leu Phe Arg Leu Met Asn Leu Gly
            405                 410                 415
Asn Asp Ala Ser Ala Ser Gln Pro Ser Thr Phe Arg Pro Ser Asn Val
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                    420                      425                      430
Glu His Arg Gly Asp Pro Phe Val Ser Glu Ile Ala Pro Arg Ala Asn
        435                      440                      445
Ser Glu Ala Glu Lys Asn Arg Ala Ala Arg Ala Gln Lys Leu Glu Glu
    450                      455                      460
Gln Arg Val Lys Asn Pro Phe His Ile Phe Thr Asn Asn Ser Leu Ile
465                      470                      475                      480
Leu Lys Gln Gly Tyr Leu Glu Lys Lys Arg Gly Leu Phe Ala Arg Arg
                485                      490                      495
Arg Met Phe Leu Leu Thr Glu Gly Pro His Leu Leu Tyr Ile Asp Val
                500                      505                      510
Pro Asn Leu Val Leu Lys Gly Glu Val Pro Trp Thr Pro Cys Met Gln
        515                      520                      525
Val Glu Leu Lys Asn Ser Gly Thr Phe Phe Ile His Thr Pro Asn Arg
        530                      535                      540
Val Tyr Tyr Leu Phe Asp Leu Glu Lys Lys Ala Asp Glu Trp Cys Lys
545                      550                      555                      560
Ala Ile Asn Asp Val Arg Lys Arg Tyr Ser Val Thr Ile Glu Lys Thr
                565                      570                      575
Phe Asn Ser Ala Met Arg Asp Gly Thr Phe Gly Ser Ile Tyr Gly Lys
        580                      585                      590
Lys Lys Ser Arg Lys Glu Met Met Arg Glu Gln Lys Ala Leu Arg Arg
        595                      600                      605
Lys Gln Glu Lys Glu Glu Lys Lys Ala Leu Lys Ala Glu Gln Val Ser
    610                      615                      620
Lys Lys Leu Ser Met Gln Met Asp Lys Lys Ser Pro
625                      630                      635


<210> 161
<211> 54
<212> PRT
<213> Homo sapiens

<400> 161
Ser Pro Val Gly His Phe Ala Lys Trp Ser Gly Ser Pro Cys Ser Arg
 1               5                      10                      15
Asn Arg Glu Glu Ala Asp Met Trp Thr Thr Phe Arg Pro Arg Ser Ser
        20                      25                      30
Ser Asn Ala Ser Ser Val Ser Thr Arg Leu Ser Pro Leu Arg Pro Glu
        35                      40                      45
Ser Glu Val Leu Ala Glu
    50


<210> 162
<211> 28
<212> PRT
<213> Homo sapiens

<400> 162
Ser Pro Phe Lys Trp Ser Pro Ser Asp Trp Thr Phe Arg Pro Arg Ser
 1               5                      10                      15
Ser Asn Ala Ser Ser Arg Leu Ser Pro Glu Leu Glu
        20                      25


<210> 163
<211> 54
```

<212> PRT
<213> Homo sapiens

<400> 163
Ser Pro Gly Ser Gln Phe Ser Lys Trp Pro Ala Ser Pro Gly Ser His
1   5   10   15
Ser Asn Asp Asp Phe Asp Asn Trp Ser Thr Phe Arg Pro Arg Thr Ser
            20   25   30
Ser Asn Ala Ser Thr Ile Ser Gly Arg Leu Ser Pro Ile Met Thr Glu
        35   40   45
Gln Asp Asp Leu Gly Glu
    50

<210> 164
<211> 17
<212> PRT
<213> Caenorhabditis elegans

<400> 164
Ser Phe Arg Pro Arg Thr Gln Ser Asn Leu Ser Ile Pro Gly Ser Ser
1   5   10   15
Ser

<210> 165
<211> 42
<212> PRT
<213> Homo sapiens

<400> 165
Lys Ala Ala Ala Ile Ile Asp Leu Asp Pro Asp Phe Glu Pro Gln Ser
1   5   10   15
Arg Pro Arg Ser Cys Thr Trp Pro Leu Pro Arg Pro Glu Ile Ala Asn
            20   25   30
Gln Pro Ser Glu Pro Pro Glu Val Glu Pro
        35   40

<210> 166
<211> 22
<212> PRT
<213> Homo sapiens

<400> 166
Ala Asp Pro Asp Phe Glu Pro Arg Pro Arg Ser Cys Thr Trp Pro Leu
1   5   10   15
Pro Arg Pro Glu Ser Pro
            20

<210> 167
<211> 42
<212> PRT
<213> Homo sapiens

<400> 167
Glu Ala Pro Gln Val Val Glu Ile Asp Pro Asp Phe Glu Pro Leu Pro

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          1             5                     10                    15
        Arg Pro Arg Ser Cys Thr Trp Pro Leu Pro Arg Pro Glu Phe Ser Gln
                    20                  25                  30
        Ser Asn Ser Ala Thr Ser Ser Pro Ala Pro
                35                  40


        <210> 168
        <211> 41
        <212> PRT
        <213> Caenorhabditis elegans

        <400> 168
        Thr Phe Met Asn Thr Pro Asp Asp Val Met Met Asn Asp Asp Met Glu
          1             5                     10                    15
        Pro Ile Pro Arg Asp Arg Cys Asn Thr Trp Pro Met Arg Arg Pro Gln
                    20                  25                  30
        Leu Glu Pro Pro Leu Asn Ser Ser Pro
                35                  40


        <210> 169
        <211> 14
        <212> PRT
        <213> Caenorhabditis elegans or Homo sapiens

        <400> 169
        Thr Pro Val Asp Glu Pro Pro Arg Arg Thr Trp Pro Arg Pro
          1             5                     10


        <210> 170
        <211> 80
        <212> PRT
        <213> Mus musculus or Homo sapiens

        <400> 170
        Leu Glu Lys Gln Ala Gly Gly Asn Pro Trp His Gln Phe Val Glu Asn
          1             5                     10                    15
        Asn Leu Ile Leu Lys Met Gly Pro Val Asp Lys Arg Lys Gly Leu Phe
                    20                  25                  30
        Ala Arg Arg Arg Gln Leu Leu Leu Thr Glu Gly Pro His Leu Tyr Tyr
                35                  40                  45
        Val Asp Pro Val Asn Lys Val Leu Lys Gly Glu Ile Pro Trp Ser Gln
            50                  55                  60
        Glu Leu Arg Pro Glu Ala Lys Asn Phe Lys Thr Phe Phe Val His Thr
        65                  70                  75                  80


        <210> 171
        <211> 47
        <212> PRT
        <213> Mus musculus or Homo sapiens or C elegans

        <400> 171
        Leu Glu Gln Asn Pro His Phe Asn Leu Ile Leu Lys Gly Lys Gly Leu
          1             5                     10                    15
        Phe Ala Arg Arg Arg Leu Leu Thr Glu Gly Pro His Leu Tyr Asp Asn
                    20                  25                  30
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Val Leu Lys Gly Glu Pro Trp Glu Lys Asn Thr Phe Phe His Thr
        35   40   45

<210> 172
<211> 80
<212> PRT
<213> Caenorhabditis elegans

<400> 172
Leu Glu Glu Gln Arg Val Lys Asn Pro Phe His Ile Phe Thr Asn Asn
 1   5   10   15
Ser Leu Ile Leu Lys Gln Gly Tyr Leu Glu Lys Lys Arg Gly Leu Phe
        20   25   30
Ala Arg Arg Arg Met Phe Leu Leu Thr Glu Gly Pro His Leu Leu Tyr
        35   40   45
Ile Asp Val Pro Asn Leu Val Leu Lys Gly Glu Val Pro Trp Thr Pro
    50   55   60
Cys Met Gln Val Glu Leu Lys Asn Ser Gly Thr Phe Phe Ile His Thr
65   70   75   80

<210> 173
<211> 113
<212> PRT
<213> Mus musculus or Homo sapiens

<400> 173
Ser Asp Leu Trp Ala Leu Gly Cys Ile Ile Tyr Gln Leu Val Ala Gly
 1   5   10   15
Leu Pro Pro Phe Arg Ala Gly Asn Glu Tyr Leu Ile Phe Gln Lys Ile
        20   25   30
Ile Lys Leu Glu Tyr Asp Phe Pro Glu Lys Phe Phe Pro Lys Ala Arg
        35   40   45
Asp Leu Val Glu Lys Leu Leu Val Leu Asp Ala Thr Lys Arg Leu Gly
    50   55   60
Cys Glu Glu Met Glu Gly Tyr Gly Pro Leu Lys Ala His Pro Phe Phe
65   70   75   80
Glu Ser Val Thr Trp Glu Asn Leu His Gln Gln Thr Pro Pro Lys Leu
                85   90   95
Thr Ala Tyr Leu Pro Ala Met Ser Glu Asp Asp Glu Asp Cys Tyr Gly
            100   105   110
Asn

<210> 174
<211> 48
<212> PRT
<213> Mus musculus or Homo sapiens or C elegans

<400> 174
Asp Trp Leu Gly Cys Ile Gln Ala Gly Pro Pro Phe Arg Ala Asn Tyr
 1   5   10   15
Ile Leu Phe Pro Glu Phe Ala Lys Leu Val Leu Glu Pro Leu Ala His
        20   25   30
Phe Phe Glu Val Trp Asn Pro Pro Leu Ala Tyr Pro Ala Glu Tyr Asn
        35   40   45

<210> 175
<211> 122
<212> PRT
<213> Caenorhabditis elegans

<400> 175
Thr Asp Ile Trp Gly Leu Gly Cys Ile Leu Phe Gln Cys Leu Ala Gly
1   5   10   15
Gln Pro Pro Phe Arg Ala Val Asn Gln Tyr His Leu Leu Lys Arg Ile
            20   25   30
Gln Glu Leu Asp Phe Ser Phe Pro Glu Gly Phe Pro Glu Glu Ala Ser
        35   40   45
Glu Ile Ile Ala Lys Ile Leu Val Gly His Glu Thr Leu Lys Thr Glu
        50   55   60
Tyr Val Ile Phe Asn Leu Gln Val Arg Asp Pro Ser Thr Arg Ile Thr
65   70   75   80
Ser Gln Glu Leu Met Ala His Lys Phe Phe Glu Asn Val Asp Trp Val
            85   90   95
Asn Ile Ala Asn Ile Lys Pro Pro Val Leu His Ala Tyr Ile Pro Ala
            100   105   110
Thr Phe Gly Glu Pro Glu Tyr Tyr Ser Asn
        115   120

<210> 176
<211> 72
<212> PRT
<213> Mus musculus or Homo sapiens

<400> 176
Phe Gly Leu Ser Tyr Ala Lys Asn Gly Glu Leu Leu Lys Tyr Ile Arg
1   5   10   15
Lys Ile Gly Ser Phe Asp Glu Thr Cys Thr Arg Phe Tyr Thr Ala Glu
            20   25   30
Ile Val Ser Ala Leu Glu Tyr Leu His Gly Lys Gly Ile Ile His Arg
        35   40   45
Asp Leu Lys Pro Glu Asn Ile Leu Leu Asn Glu Asp Met His Ile Gln
        50   55   60
Ile Thr Asp Phe Gly Thr Ala Lys
65   70

<210> 177
<211> 31
<212> PRT
<213> Mus musculus or Homo sapiens or C elegans

<400> 177
Phe Asn Gly Leu Gly Ser Phe Asp Phe Glu Ile Leu Leu His Ile His
1   5   10   15
Arg Asp Lys Pro Asn Leu Asp His Ile Ile Thr Asp Phe Gly Ala
            20   25   30

<210> 178
<211> 72
<212> PRT
<213> Caenorhabditis elegans

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<400> 178
Phe Val Ile Gly Leu Val Glu Asn Gly Asp Leu Gly Glu Ser Leu Cys
1   5   10   15
His Phe Gly Ser Phe Asp Met Leu Thr Ser Lys Phe Phe Ala Ser Glu
            20   25   30
Ile Leu Thr Gly Leu Gln Phe Leu His Asp Asn Lys Ile Val His Arg
        35   40   45
Asp Met Lys Pro Asp Asn Val Leu Ile Gln Lys Asp Gly His Ile Leu
    50   55   60
Ile Thr Asp Phe Gly Ser Ala Gln
65   70

<210> 179
<211> 48
<212> PRT
<213> Mus musculus or Homo sapiens

<400> 179
Tyr Ala Ile Lys Ile Leu Glu Lys Arg His Ile Ile Lys Glu Asn Lys
1   5   10   15
Val Pro Tyr Val Thr Arg Glu Arg Asp Val Met Ser Arg Leu Asp His
            20   25   30
Pro Phe Phe Val Lys Leu Tyr Phe Thr Phe Gln Asp Asp Glu Lys Leu
        35   40   45

<210> 180
<211> 15
<212> PRT
<213> Mus musculus or Homo sapiens or C elegans

<400> 180
Ala Lys Leu Lys Lys Arg Glu Leu His Pro Phe Leu Tyr Phe Asp
1   5   10   15

<210> 181
<211> 53
<212> PRT
<213> Caenorhabditis elegans

<400> 181
Phe Ala Val Lys Val Leu Gln Lys Ser Tyr Leu Asn Arg His Gln Lys
1   5   10   15
Met Asp Ala Ile Ile Arg Glu Lys Asn Ile Leu Thr Tyr Leu Ser Gln
            20   25   30
Glu Cys Gly Gly His Pro Phe Val Thr Gln Leu Tyr Thr His Phe His
        35   40   45
Asp Gln Ala Arg Ile
    50

<210> 182
<211> 29
<212> PRT
<213> Mus musculus or Homo sapiens

<400> 182

```
Pro Asn Arg Thr Tyr Tyr Leu Met Asp Pro Ser Gly Asn Ala His Lys
1               5                   10                  15
Trp Cys Arg Lys Ile Gln Glu Val Trp Arg Gln Arg Tyr
            20                  25


<210> 183
<211> 15
<212> PRT
<213> Mus musculus or Homo sapiens or C elegans

<400> 183
Pro Asn Arg Tyr Tyr Leu Asp Ala Trp Cys Ile Val Arg Arg Tyr
1               5                   10                  15


<210> 184
<211> 28
<212> PRT
<213> Caenorhabditis elegans

<400> 184
Pro Asn Arg Val Tyr Tyr Leu Phe Asp Leu Glu Lys Lys Ala Asp Glu
1                 5                   10                  15
Trp Cys Lys Ala Ile Asn Asp Val Arg Lys Arg Tyr
            20                  25


<210> 185
<211> 25
<212> PRT
<213> Mus musculus or Homo sapiens

<400> 185
Pro Glu Ser Lys Gln Ala Arg Ala Asn Ser Phe Val Gly Thr Ala Gln
1               5                   10                  15
Tyr Val Ser Pro Glu Leu Leu Thr Glu
            20                  25


<210> 186
<211> 15
<212> PRT
<213> Mus musculus or Homo sapiens or C elegans

<400> 186
Pro Glu Ala Arg Phe Val Gly Thr Ala Tyr Val Ser Pro Glu Leu
1               5                   10                  15


<210> 187
<211> 25
<212> PRT
<213> Caenorhabditis elegans

<400> 187
Pro Glu Glu Asn Thr Ala Arg Arg Thr Thr Phe Val Gly Thr Ala Leu
1               5                   10                  15
Tyr Val Ser Pro Glu Met Leu Ala Asp
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<210> 188
<211> 62
<212> PRT
<213> Caenorhabditis elegans

<400> 188
Lys Arg Thr Ser Asn Asp Phe Met Phe Leu Gln Ser Met Gly Glu Gly
1   5   10   15
Ala Tyr Ser Gln Val Phe Arg Cys Arg Glu Val Ala Thr Asp Ala Met
            20   25   30
Phe Ala Val Lys Val Leu Gln Lys Ser Tyr Leu Asn Arg His Gln Lys
        35   40   45
Met Asp Ala Ile Ile Arg Glu Lys Asn Ile Leu Thr Tyr Leu
    50   55   60

<210> 189
<211> 21
<212> PRT
<213> Caenorhabditis elegans or Homo sapiens

<400> 189
Lys Asp Phe Phe Gly Glu Gly Ser Val Arg Glu Ala Thr Ala Lys Leu
1   5   10   15
Lys Lys Arg Glu Leu
            20

<210> 190
<211> 62
<212> PRT
<213> Homo sapiens

<400> 190
Lys Lys Arg Pro Glu Asp Phe Lys Phe Gly Lys Ile Leu Gly Glu Gly
1   5   10   15
Ser Phe Ser Thr Val Val Leu Ala Arg Glu Leu Ala Thr Ser Arg Glu
            20   25   30
Tyr Ala Ile Lys Ile Leu Glu Lys Arg His Ile Ile Lys Glu Asn Lys
        35   40   45
Val Pro Tyr Val Thr Arg Glu Arg Asp Val Met Ser Arg Leu
    50   55   60

<210> 191
<211> 90
<212> PRT
<213> Caenorhabditis elegans

<400> 191
His Pro Phe Val Thr Gln Leu Tyr Thr His Phe His Asp Gln Ala Arg
1   5   10   15
Ile Tyr Phe Val Ile Gly Leu Val Glu Asn Gly Asp Leu Gly Glu Ser
            20   25   30
Leu Cys His Phe Gly Ser Phe Asp Met Leu Thr Ser Lys Phe Phe Ala
        35   40   45

Ser Glu Ile Leu Thr Gly Leu Gln Phe Leu His Asp Asn Lys Ile Val
    50   55   60
His Arg Asp Met Lys Pro Asp Asn Val Leu Ile Gln Lys Asp Gly His
65   70   75   80
Ile Leu Ile Thr Asp Phe Gly Ser Ala Gln
                85   90

<210> 192
<211> 39
<212> PRT
<213> Caenorhabditis elegans

<400> 192
His Pro Phe Leu Tyr Phe Asp Tyr Phe Asn Gly Leu Gly Ser Phe Asp
 1   5   10   15
Phe Glu Ile Leu Leu His Ile His Arg Asp Lys Pro Asn Leu Asp His
                20   25   30
Ile Ile Thr Asp Phe Gly Ala
            35

<210> 193
<211> 90
<212> PRT
<213> Homo sapiens

<400> 193
His Pro Phe Phe Val Lys Leu Tyr Phe Thr Phe Gln Asp Asp Glu Lys
 1   5   10   15
Leu Tyr Phe Gly Leu Ser Tyr Ala Lys Asn Gly Glu Leu Leu Lys Tyr
                20   25   30
Ile Arg Lys Ile Gly Ser Phe Asp Glu Thr Cys Thr Arg Phe Tyr Thr
            35   40   45
Ala Glu Ile Val Ser Ala Leu Glu Tyr Leu His Gly Lys Gly Ile Ile
    50   55   60
His Arg Asp Leu Lys Pro Glu Asn Ile Leu Leu Asn Glu Asp Met His
65   70   75   80
Ile Gln Ile Thr Asp Phe Gly Thr Ala Lys
                85   90

<210> 194
<211> 98
<212> PRT
<213> Caenorhabditis elegans

<400> 194
Glu Glu Asn Thr Ala Arg Arg Thr Thr Phe Val Gly Thr Ala Leu Tyr
 1   5   10   15
Val Ser Pro Glu Met Leu Ala Asp Gly Asp Val Gly Pro Gln Thr Asp
                20   25   30
Ile Trp Gly Leu Gly Cys Ile Leu Phe Gln Cys Leu Ala Gly Gln Pro
            35   40   45
Pro Phe Arg Ala Val Asn Gln Tyr His Leu Leu Lys Arg Ile Gln Glu
    50   55   60
Leu Asp Phe Ser Phe Pro Glu Gly Phe Pro Glu Glu Ala Ser Glu Ile
65   70   75   80
Ile Ala Lys Ile Leu Val Arg Asp Pro Ser Thr Arg Ile Thr Ser Gln

Glu Leu

<210> 195
<211> 43
<212> PRT
<213> Caenorhabditis elegans or Homo sapiens

<400> 195
Glu Ala Arg Phe Val Gly Thr Ala Tyr Val Ser Pro Glu Leu Asp Trp
 1   5   10   15
Leu Gly Cys Ile Gln Ala Gly Pro Pro Phe Arg Ala Asn Tyr Ile Leu
            20   25   30
Phe Pro Glu Phe Ala Lys Leu Val Asp Arg Glu
        35   40

<210> 196
<211> 98
<212> PRT
<213> Homo sapiens

<400> 196
Glu Ser Lys Gln Ala Arg Ala Asn Ser Phe Val Gly Thr Ala Gln Tyr
 1   5   10   15
Val Ser Pro Glu Leu Leu Thr Glu Lys Ser Ala Cys Lys Ser Ser Asp
            20   25   30
Leu Trp Ala Leu Gly Cys Ile Ile Tyr Gln Leu Val Ala Gly Leu Pro
            35   40   45
Pro Phe Arg Ala Gly Asn Glu Tyr Leu Ile Phe Gln Lys Ile Ile Lys
        50   55   60
Leu Glu Tyr Asp Phe Pro Glu Lys Phe Phe Pro Lys Ala Arg Asp Leu
65   70   75   80
Val Glu Lys Leu Leu Val Leu Asp Ala Thr Lys Arg Leu Gly Cys Glu
                85   90   95
Glu Met

<210> 197
<211> 35
<212> PRT
<213> Caenorhabditis elegans

<400> 197
Leu Met Ala His Lys Phe Phe Glu Asn Val Asp Trp Val Asn Ile Ala
 1   5   10   15
Asn Ile Lys Pro Pro Val Leu His Ala Tyr Ile Pro Ala Thr Phe Gly
            20   25   30
Glu Pro Glu
        35

<210> 198
<211> 17
<212> PRT
<213> Caenorhabditis elegans or Homo sapiens

```
<400> 198
Leu Ala His Phe Phe Glu Val Trp Asn Pro Pro Leu Ala Tyr Pro Ala
 1               5                  10                  15
Glu


<210> 199
<211> 35
<212> PRT
<213> Homo sapiens

<400> 199
Leu Lys Ala His Pro Phe Phe Glu Ser Val Thr Trp Glu Asn Leu His
 1               5                  10                  15
Gln Gln Thr Pro Pro Lys Leu Thr Ala Tyr Leu Pro Ala Met Ser Glu
            20                  25                  30
Asp Asp Glu
        35


<210> 200
<211> 104
<212> PRT
<213> Caenorhabditis elegans

<400> 200
Leu Glu Glu Gln Arg Val Lys Asn Pro Phe His Ile Phe Thr Asn Asn
 1               5                  10                  15
Ser Leu Ile Leu Lys Gln Gly Tyr Leu Glu Lys Lys Arg Gly Leu Phe
            20                  25                  30
Ala Arg Arg Arg Met Phe Leu Leu Thr Glu Gly Pro His Leu Leu Tyr
        35                  40                  45
Ile Asp Val Pro Asn Leu Val Leu Lys Gly Glu Val Pro Trp Thr Pro
    50                  55                  60
Cys Met Gln Val Glu Leu Lys Asn Ser Gly Thr Phe Phe Ile His Thr
65                  70                  75                  80
Pro Asn Arg Val Tyr Tyr Leu Phe Asp Leu Glu Lys Lys Ala Asp Glu
                85                  90                  95
Trp Cys Lys Ala Ile Asn Asp Val
            100


<210> 201
<211> 59
<212> PRT
<213> Caenorhabditis elegans or Homo sapiens

<400> 201
Leu Glu Gln Asn Pro His Phe Asn Leu Ile Leu Lys Gly Lys Gly Leu
 1               5                  10                  15
Phe Ala Arg Arg Arg Leu Leu Thr Glu Gly Pro His Leu Tyr Asp Asn
            20                  25                  30
Val Leu Lys Gly Glu Pro Trp Glu Lys Asn Thr Phe Phe His Thr Pro
        35                  40                  45
Asn Arg Tyr Tyr Leu Asp Ala Trp Cys Ile Val
    50                  55
```

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<210> 202
<211> 104
<212> PRT
<213> Homo sapiens

<400> 202
Leu Glu Lys Gln Ala Gly Gly Asn Pro Trp His Gln Phe Val Glu Asn
1   5   10   15
Asn Leu Ile Leu Lys Met Gly Pro Val Asp Lys Arg Lys Gly Leu Phe
            20   25   30
Ala Arg Arg Arg Gln Leu Leu Leu Thr Glu Gly Pro His Leu Tyr Tyr
            35   40   45
Val Asp Pro Val Asn Lys Val Leu Lys Gly Glu Ile Pro Trp Ser Gln
        50   55   60
Glu Leu Arg Pro Glu Ala Lys Asn Phe Lys Thr Phe Phe Val His Thr
65   70   75   80
Pro Asn Arg Thr Tyr Tyr Leu Met Asp Pro Ser Gly Asn Ala His Lys
                85   90   95
Trp Cys Arg Lys Ile Gln Glu Val
            100

<210> 203
<211> 45
<212> PRT
<213> Homo sapiens

<400> 203
Lys Leu Glu Asn Leu Met Leu Asp Lys Asp Gly His Ile Lys Ile Thr
1   5   10   15
Asp Phe Gly Leu Cys Lys Glu Gly Ile Lys Asp Gly Ala Thr Met Lys
            20   25   30
Thr Phe Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val
            35   40   45

<210> 204
<211> 36
<212> PRT
<213> Homo sapiens or Caenorhabditis elegans

<400> 204
Lys Leu Glu Asn Leu Leu Asp Lys Asp Gly His Ile Lys Ile Asp Phe
1   5   10   15
Gly Leu Cys Lys Glu Ile Gly Thr Phe Cys Gly Thr Pro Glu Tyr Leu
            20   25   30
Ala Pro Glu Val
        35

<210> 205
<211> 45
<212> PRT
<213> Caenorhabditis elegans

<400> 205
Lys Leu Glu Asn Leu Leu Leu Asp Lys Asp Gly His Ile Lys Ile Ala
1   5   10   15
Asp Phe Gly Leu Cys Lys Glu Glu Ile Ser Phe Gly Asp Lys Thr Ser

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                    20                      25                      30
Thr Phe Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val
            35                      40                      45



<210> 206
<211> 62
<212> PRT
<213> Caenorhabditis elegans

<400> 206
Leu Cys Lys Glu Glu Ile Lys Tyr Gly Asp Lys Thr Ser Thr Phe Cys
 1               5                   10                  15
Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val Ile Glu Asp Ile Asp Tyr
            20                  25                  30
Asp Arg Ser Val Asp Trp Trp Gly Val Gly Val Val Met Tyr Glu Met
            35                  40                  45
Met Cys Gly Arg Leu Pro Phe Ser Ala Lys Glu Asn Gly Lys
        50                  55                  60



<210> 207
<211> 43
<212> PRT
<213> Caenorhabditis elegans or Mus musculus

<400> 207
Leu Cys Lys Glu Ile Gly Thr Phe Cys Gly Thr Pro Glu Tyr Leu Ala
 1               5                   10                  15
Pro Glu Val Glu Asp Asp Tyr Arg Val Asp Trp Trp Gly Gly Val Val
            20                  25                  30
Met Tyr Glu Met Met Cys Gly Arg Leu Pro Phe
        35                  40



<210> 208
<211> 492
<212> PRT
<213> Caenorhabditis elegans

<400> 208
Met Gly Val Asn Asp His Asp Val Ser Val Pro Leu Gln Glu Val Gln
 1               5                   10                  15
Ser Arg Thr Val Glu Gly Lys Leu Thr Lys Cys Leu Ala Phe Ser Ala
            20                  25                  30
Phe Val Ile Thr Leu Ala Ser Phe Gln Phe Gly Tyr His Ile Gly Cys
            35                  40                  45
Val Asn Ala Pro Gly Gly Leu Ile Thr Glu Trp Ile Ile Gly Ser His
        50                  55                  60
Lys Asp Leu Phe Asp Lys Glu Leu Ser Arg Glu Asn Ala Asp Leu Ala
65                  70                  75                  80
Trp Ser Val Ala Val Ser Val Phe Ala Val Gly Gly Met Ile Gly Gly
                85                  90                  95
Leu Ser Ser Gly Trp Leu Ala Asp Lys Val Gly Arg Arg Gly Ala Leu
            100                 105                 110
Phe Tyr Asn Asn Leu Leu Ala Leu Ala Ala Ala Leu Met Gly Leu
            115                 120                 125
Ala Lys Ser Val Gly Ala Tyr Pro Met Val Ile Leu Gly Arg Leu Ile
        130                 135                 140
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```
Ile Gly Leu Asn Cys Gly Phe Ser Ser Ala Leu Val Pro Met Phe Leu
145                 150                 155                 160
Thr Glu Ile Ser Pro Asn Asn Leu Arg Gly Met Leu Gly Ser Leu His
                165                 170                 175
Gln Leu Leu Val Thr Ile Ala Ile Leu Val Ser Gln Ile Phe Gly Leu
            180                 185                 190
Pro His Leu Leu Gly Thr Gly Asp Arg Trp Pro Leu Ile Phe Ala Phe
            195                 200                 205
Thr Val Val Pro Ala Val Leu Gln Leu Ala Leu Leu Met Leu Cys Pro
    210                 215                 220
Glu Ser Pro Lys Tyr Thr Met Ala Val Arg Gly Gln Arg Asn Glu Ala
225                 230                 235                 240
Glu Ser Ala Leu Lys Lys Leu Arg Asp Thr Glu Asp Val Ser Thr Glu
                245                 250                 255
Ile Glu Ala Met Gln Glu Glu Ala Thr Ala Ala Gly Val Gln Glu Lys
            260                 265                 270
Pro Lys Met Gly Asp Met Phe Lys Gly Ala Leu Leu Trp Pro Met Ser
            275                 280                 285
Ile Ala Ile Met Met Met Leu Ala Gln Gln Leu Ser Gly Ile Asn Val
            290                 295                 300
Ala Met Phe Tyr Ser Thr Val Ile Phe Arg Gly Ala Gly Leu Thr Gly
305                 310                 315                 320
Asn Glu Pro Phe Tyr Ala Thr Ile Gly Met Gly Ala Val Asn Val Ile
                325                 330                 335
Met Thr Leu Ile Ser Val Trp Leu Val Asp His Pro Lys Phe Gly Arg
            340                 345                 350
Arg Ser Leu Leu Leu Ala Gly Leu Thr Gly Met Phe Val Ser Thr Leu
            355                 360                 365
Leu Leu Val Gly Ala Leu Thr Ile Gln Asn Ser Gly Gly Asp Lys Trp
    370                 375                 380
Ala Ser Tyr Ser Ala Ile Gly Phe Val Leu Leu Phe Val Ile Ser Phe
385                 390                 395                 400
Ala Thr Gly Pro Gly Ala Ile Pro Trp Phe Phe Val Ser Glu Ile Phe
                405                 410                 415
Asp Ser Ser Ala Arg Gly Asn Ala Asn Ser Ile Ala Val Met Val Asn
            420                 425                 430
Trp Ala Ala Asn Leu Leu Val Gly Leu Thr Phe Leu Pro Ile Asn Asn
            435                 440                 445
Leu Met Gln Gln Tyr Ser Phe Phe Ile Phe Ser Gly Phe Leu Ala Phe
    450                 455                 460
Phe Ile Phe Tyr Thr Trp Lys Phe Val Pro Glu Thr Lys Gly Lys Ser
465                 470                 475                 480
Ile Glu Gln Ile Gln Ala Glu Phe Glu Lys Arg Lys
                485                 490
```

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<210> 209
<211> 22
<212> PRT
<213> Caenorhabditis elegans

<400> 209
Arg Asn Glu Ala Glu Ser Ala Leu Lys Lys Leu Arg Asp Thr Glu Asp
 1               5                   10                  15
Val Ser Thr Glu Ile Glu
            20


<210> 210
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<211> 28
<212> DNA
<213> Caenorhabditis elegans

<400> 210
tctcgttgtt tgccgtcgga tgtctgcc   28

<210> 211
<211> 223
<212> PRT
<213> Ascoris suum

<400> 211
Ala Lys Asn Asn Gly Glu Phe Val Arg Cys Val His Ser Val Gly Gln
 1   5   10   15
Pro Lys Pro Val Ala Thr Lys Val Ile Asn His Trp Pro Cys Asn Pro
            20   25   30
Glu Lys Thr Ile Ile Ala His Arg Pro Ala Glu Arg Glu Ile Trp Ser
        35   40   45
Phe Gly Ser Gly Tyr Gly Gly Asn Ser Leu Leu Gly Lys Lys Cys Phe
    50   55   60
Ala Leu Arg Ile Ala Met Asn Ile Gly Tyr Asp Glu Gly Trp Met Ala
65   70   75   80
Glu His Met Leu Ile Met Gly Val Thr Ser Pro Lys Gly Glu Glu Arg
            85   90   95
Phe Val Ala Ala Ala Phe Pro Ser Ala Cys Gly Lys Thr Asn Leu Ala
            100   105   110
Met Leu Glu Pro Thr Ile Pro Gly Trp Lys Val Arg Val Ile Gly Asp
        115   120   125
Asp Ile Ala Trp Met Lys Phe Gly Ala Asp Gly Arg Leu Tyr Ala Ile
    130   135   140
Asn Pro Glu Tyr Gly Phe Phe Gly Val Ala Pro Gly Thr Ser His Lys
145   150   155   160
Thr Asn Pro Met Ala Met Ala Ser Phe Gln Glu Asn Thr Ile Phe Thr
            165   170   175
Asn Val Ala Glu Thr Ala Asp Gly Glu Tyr Phe Trp Glu Gly Leu Glu
            180   185   190
His Glu Val Lys Asn Pro Lys Val Asp Met Ile Asn Trp Leu Gly Glu
        195   200   205
Pro Trp His Ile Gly Asp Glu Ser Lys Ala Ala His Pro Asn Ser
    210   215   220

<210> 212
<211> 176
<212> PRT
<213> Caenorhabditis elegans or Ascoris suum

<400> 212
Ala Asn Phe Val Arg Cys His Ser Val Gly Pro Pro Val Val Ile Asn
 1   5   10   15
His Trp Pro Cys Asn Pro Glu Ile Ala His Arg Pro Glu Arg Glu Ile
            20   25   30
Trp Ser Phe Gly Ser Gly Tyr Gly Gly Asn Ser Leu Leu Gly Lys Lys
        35   40   45
Cys Phe Ala Leu Arg Ile Ala Asn Ile Asp Glu Gly Trp Met Ala Glu
    50   55   60
His Met Leu Ile Met Gly Val Thr Pro Gly Glu Phe Ala Ala Ala Phe
65   70   75   80

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Pro Ser Ala Cys Gly Lys Thr Asn Leu Ala Met Leu Glu Pro Thr Pro
              85                      90                      95
Gly Trp Lys Val Arg Gly Asp Asp Ile Ala Trp Met Lys Phe Gly Asp
             100                     105                 110
Gly Arg Leu Tyr Ala Ile Asn Pro Glu Gly Phe Phe Gly Val Ala Pro
             115                 120                 125
Gly Thr Ser Lys Thr Asn Pro Met Ala Ala Phe Gln Asn Ile Phe Thr
    130                 135                 140
Asn Val Ala Glu Thr Ala Gly Glu Tyr Phe Trp Glu Gly Leu Glu Glu
145                 150                 155                     160
Val Asp Trp Leu Gly Glu Trp His Ile Gly Ala Ala His Pro Asn Ser
             165                 170                 175
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<210> 213
<211> 223
<212> PRT
<213> Caenorhabditis elegans

<400> 213
Ala Leu Gly Asn Gln Asp Phe Val Arg Cys Ile His Ser Val Gly Leu
  1              5                  10                  15
Pro Arg Pro Val Lys Gln Arg Val Ile Asn His Trp Pro Cys Asn Pro
             20                  25                  30
Glu Arg Val Leu Ile Ala His Arg Pro Pro Glu Arg Glu Ile Trp Ser
             35                  40                  45
Phe Gly Ser Gly Tyr Gly Gly Asn Ser Leu Leu Gly Lys Lys Cys Phe
    50                  55                  60
Ala Leu Arg Ile Ala Ser Asn Ile Ala Lys Asp Glu Gly Trp Met Ala
65                  70                  75                      80
Glu His Met Leu Ile Met Gly Val Thr Arg Pro Cys Gly Arg Glu His
             85                  90                  95
Phe Ile Ala Ala Ala Phe Pro Ser Ala Cys Gly Lys Thr Asn Leu Ala
             100                 105                 110
Met Leu Glu Pro Thr Leu Pro Gly Trp Lys Val Arg Cys Val Gly Asp
             115                 120                 125
Asp Ile Ala Trp Met Lys Phe Gly Glu Asp Gly Arg Leu Tyr Ala Ile
    130                 135                 140
Asn Pro Glu Ala Gly Phe Phe Gly Val Ala Pro Gly Thr Ser Asn Lys
145                 150                 155                     160
Thr Asn Pro Met Ala Val Ala Thr Phe Gln Lys Asn Ser Ile Phe Thr
             165                 170                 175
Asn Val Ala Glu Thr Ala Asn Gly Glu Tyr Phe Trp Glu Gly Leu Glu
             180                 185                 190
Asp Glu Ile Ala Asp Lys Asn Val Asp Ile Thr Thr Trp Leu Gly Glu
             195                 200                 205
Lys Trp His Ile Gly Glu Pro Gly Val Ala Ala His Pro Asn Ser
    210                 215                 220
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<210> 214
<211> 173
<212> PRT
<213> Ascoris suum

<400> 214
Lys Gly Asp Phe Val Ser Leu Pro Lys His Val Gln Arg Phe Val Ala
  1              5                  10                  15
Glu Lys Ala Glu Leu Met Lys Pro Ser Ala Ile Phe Ile Cys Asp Gly
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                 20                    25                    30
Ser Gln Asn Glu Ala Asp Glu Leu Ile Ala Arg Cys Val Glu Arg Gly
         35                    40                    45
Val Leu Val Pro Leu Lys Ala Tyr Lys Asn Asn Tyr Leu Cys Arg Thr
     50                    55                    60
Asp Pro Arg Asp Val Ala Arg Val Glu Ser Lys Thr Trp Met Ile Thr
65                    70                    75                    80
Pro Glu Lys Tyr Asp Ser Val Cys His Thr Pro Glu Gly Val Lys Pro
                 85                    90                    95
Met Met Gly Gln Trp Met Ser Pro Asp Glu Phe Gly Lys Glu Leu Asp
                 100                   105                   110
Asp Arg Phe Pro Gly Cys Met Ala Gly Arg Thr Met Tyr Val Ile Pro
             115                   120                   125
Tyr Ser Met Gly Pro Val Gly Gly Pro Leu Ser Lys Ile Gly Ile Glu
     130                   135                   140
Leu Thr Asp Ser Asp Tyr Val Val Leu Cys Met Arg Ile Met Thr Arg
145                   150                   155                   160
Met Gly Glu Pro Val Leu Lys Ala Leu Ala Lys Asn Asn
                 165                   170
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<210> 215
<211> 120
<212> PRT
<213> Caenorhabditis elegans or Ascoris suum

<400> 215
Gly Asp Phe Leu Pro Val Gln Arg Phe Ala Glu Lys Ala Glu Leu Met
1                5                    10                    15
Pro Ile Phe Ile Cys Asp Gly Ser Gln Glu Ala Asp Glu Leu Ile Glu
             20                    25                    30
Arg Gly Leu Leu Ala Tyr Asn Asn Tyr Cys Arg Thr Asp Pro Asp Val
         35                    40                    45
Ala Arg Val Glu Ser Lys Thr Trp Met Thr Lys Tyr Asp Val His Thr
     50                    55                    60
Glu Gly Val Pro Met Gly Trp Pro Glu Leu Asp Arg Phe Pro Gly Cys
65                    70                    75                    80
Met Ala Gly Arg Met Tyr Val Ile Pro Ser Met Gly Pro Val Gly Gly
                 85                    90                    95
Pro Leu Ser Lys Ile Gly Ile Leu Thr Asp Ser Tyr Val Val Leu Met
             100                   105                   110
Arg Ile Met Thr Arg Val Ala Leu
         115                   120
```

```
<210> 216
<211> 173
<212> PRT
<213> Caenorhabditis elegans

<400> 216
Gln Gly Asp Phe His Leu Leu Pro Ala Lys Val Gln Arg Phe Ile Ala
1                5                    10                    15
Glu Lys Ala Glu Leu Met Arg Pro Arg Gly Ile Phe Ile Cys Asp Gly
             20                    25                    30
Ser Gln His Glu Ala Asp Glu Leu Ile Asp Lys Leu Ile Glu Arg Gly
         35                    40                    45
Met Leu Ser Lys Leu Glu Ala Tyr Glu Asn Asn Tyr Ile Cys Arg Thr
     50                    55                    60
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Asp Pro Lys Asp Val Ala Arg Val Glu Ser Lys Thr Trp Met Val Thr
65                  70                  75                  80
Lys Asn Lys Tyr Asp Thr Val Thr His Thr Lys Glu Gly Val Glu Pro
                85                  90                  95
Ile Met Gly His Trp Leu Ala Pro Glu Asp Leu Ala Thr Glu Leu Asp
            100                 105                 110
Ser Arg Phe Pro Gly Cys Met Ala Gly Arg Ile Met Tyr Val Ile Pro
        115                 120                 125
Phe Ser Met Gly Pro Val Gly Gly Pro Leu Ser Lys Ile Gly Ile Gln
    130                 135                 140
Leu Thr Asp Ser Asn Tyr Val Val Leu Ser Met Arg Ile Met Thr Arg
145                 150                 155                 160
Val Asn Asn Asp Val Trp Asp Ala Leu Gly Asn Gln Asp
                165                 170


<210> 217
<211> 107
<212> PRT
<213> Ascoris suum

<400> 217
Arg Phe Thr Ala Pro Ala Gly Gln Cys Pro Ile Ile His Pro Asp Trp
 1               5                  10                  15
Glu Lys Pro Glu Gly Val Pro Ile Asp Ala Ile Ile Phe Gly Gly Arg
            20                  25                  30
Arg Pro Glu Gly Val Pro Leu Val Phe Glu Ser Arg Ser Trp Val His
        35                  40                  45
Gly Ile Phe Val Gly Ala Cys Val Lys Ser Glu Ala Thr Ala Ala Ala
    50                  55                  60
Glu His Thr Gly Lys Gln Val Met His Asp Pro Met Ala Met Arg Pro
65                  70                  75                  80
Phe Met Gly Tyr Asn Phe Gly Arg Tyr Met Arg His Trp Met Lys Leu
                85                  90                  95
Gly Gln Pro Pro His Lys Val Pro Lys Ile Phe
            100                 105


<210> 218
<211> 77
<212> PRT
<213> Caenorhabditis elegans or Ascoris suum

<400> 218
Arg Phe Ala Pro Ala Gln Cys Pro Ile Ile His Pro Asp Trp Glu Pro
 1               5                  10                  15
Gly Val Pro Ile Ala Ile Ile Phe Gly Gly Arg Arg Pro Gly Val Pro
            20                  25                  30
Leu Glu Ser Trp His Gly Phe Gly Cys Lys Ser Glu Ala Thr Ala Ala
        35                  40                  45
Ala Glu Thr Gly Lys Val Met His Asp Pro Met Ala Met Arg Pro Phe
    50                  55                  60
Met Gly Tyr Asn Phe Gly Tyr His Trp Leu Lys Val Phe
65                  70                  75


<210> 219
<211> 107
<212> PRT
```

<213> Caenorhabditis elegans

<400> 219
Arg Phe Ala Ala Pro Ala Asn Gln Cys Pro Ile Ile His Pro Asp Trp
1   5   10   15
Glu Ser Pro Gln Gly Val Pro Ile Glu Ala Ile Ile Phe Gly Gly Arg
            20   25   30
Arg Pro Gln Gly Val Pro Leu Ile Tyr Glu Thr Asn Ser Trp Glu His
        35   40   45
Gly Val Phe Thr Gly Ser Cys Leu Lys Ser Glu Ala Thr Ala Ala Ala
    50   55   60
Glu Phe Thr Gly Lys Thr Val Met His Asp Pro Met Ala Met Arg Pro
65   70   75   80
Phe Met Gly Tyr Asn Phe Gly Lys Tyr Leu Gln His Trp Leu Asp Leu
            85   90   95
Lys Thr Asp Ser Arg Lys Val Ile Asp Phe Phe
            100   105

<210> 220
<211> 116
<212> PRT
<213> Ascoris suum

<400> 220
Val Pro Lys Ile Phe His Val Asn Trp Phe Arg Gln Ser Ala Asp His
1   5   10   15
Lys Phe Leu Trp Pro Gly Tyr Gly Asp Asn Ile Arg Val Ile Asp Trp
            20   25   30
Ile Leu Arg Arg Cys Ser Gly Asp Ala Thr Ile Ala Glu Glu Thr Pro
        35   40   45
Ile Gly Phe Ile Pro Lys Lys Gly Thr Ile Asn Leu Glu Gly Leu Pro
    50   55   60
Asn Val Asn Trp Asp Glu Leu Met Ser Ile Pro Lys Ser Tyr Trp Leu
65   70   75   80
Glu Asp Met Val Glu Thr Lys Thr Phe Phe Glu Asn Gln Val Gly Ser
            85   90   95
Asp Leu Pro Pro Glu Ile Ala Lys Glu Leu Glu Ala Gln Thr Glu Arg
            100   105   110
Ile Lys Ala Leu
        115

<210> 221
<211> 68
<212> PRT
<213> Caenorhabditis elegans or Ascoris suum

<400> 221
Pro Lys Ile His Val Asn Trp Phe Arg Lys Phe Leu Trp Pro Gly Gly
1   5   10   15
Asp Asn Ile Arg Val Ile Asp Trp Ile Arg Arg Gly Ile Glu Thr Pro
            20   25   30
Ile Gly Pro Lys Gly Ile Asn Leu Glu Gly Leu Val Asn Trp Asp Glu
        35   40   45
Leu Met Ser Pro Tyr Trp Asp Glu Phe Gln Val Gly Asp Leu Pro Glu
    50   55   60
Ala Gln Arg Leu
65

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<210> 222
<211> 116
<212> PRT
<213> Caenorhabditis elegans

<400> 222
Met Pro Lys Ile Tyr His Val Asn Trp Phe Arg Lys Asp Ser Asn Asn
1   5   10   15
Lys Phe Leu Trp Pro Gly Phe Gly Asp Asn Ile Arg Val Ile Asp Trp
            20   25   30
Ile Ile Arg Arg Leu Asp Gly Glu Gln Glu Ile Gly Val Glu Thr Pro
        35   40   45
Ile Gly Thr Val Pro Ala Lys Gly Ser Ile Asn Leu Glu Gly Leu Gly
    50   55   60
Glu Val Asn Trp Asp Glu Leu Met Ser Val Pro Ala Asp Tyr Trp Lys
65   70   75   80
Gln Asp Ala Gln Glu Ile Arg Lys Phe Leu Asp Glu Gln Val Gly Glu
            85   90   95
Asp Leu Pro Glu Pro Val Arg Ala Glu Met Asp Ala Gln Glu Lys Arg
            100   105   110
Val Gln Thr Leu
        115

<210> 223
<211> 36
<212> PRT
<213> Ascoris suum

<400> 223
Ser Leu Ser His Phe Lys Asp Asp Asp Phe Ala Val Val Ser Glu Val
1   5   10   15
Val Thr His Lys Gln Asn His Ile Pro Val Ile Lys Gly Asp Phe Val
            20   25   30
Ser Leu Pro Lys
        35

<210> 224
<211> 15
<212> PRT
<213> Caenorhabditis elegans or Ascoris suum

<400> 224
Ser Leu Asp Phe Val Val Glu Val Val His Pro Lys Phe Ser Lys
1   5   10   15

<210> 225
<211> 36
<212> PRT
<213> Caenorhabditis elegans

<400> 225
Ser Leu Arg Gln Ile Ser Glu Asp Ala Phe Tyr Val Val Asn Glu Val
1   5   10   15
Val Met Lys Arg Leu Gly His Val Pro Ile Leu Lys Val Ile Phe Glu
            20   25   30

Ser Ser Glu Lys
          35

<210> 226
<211> 25
<212> PRT
<213> Ascoris suum

<400> 226
Gly Cys Met Ala Gly Arg Thr Met Tyr Val Ile Pro Tyr Ser Met Gly
 1   5   10   15
Pro Val Gly Gly Pro Leu Ser Lys Ile
            20   25

<210> 227
<211> 9
<212> PRT
<213> Caenorhabditis elegans or Ascoris suum

<400> 227
Gly Cys Arg Val Pro Ser Pro Leu Lys
 1   5

<210> 228
<211> 25
<212> PRT
<213> Caenorhabditis elegans

<400> 228
Gly Cys Ser Gly Arg Arg Val Leu Cys Val Cys Pro Cys Ser His Ser
 1   5   10   15
Ser Ser Ala Leu Pro Leu Gln Lys Val
            20   25

<210> 229
<211> 16
<212> PRT
<213> Ascoris suum

<400> 229
Leu Pro Asn Val Asn Trp Asp Glu Leu Met Ser Ile Pro Lys Ser Tyr
 1   5   10   15

<210> 230
<211> 7
<212> PRT
<213> Caenorhabditis elegans or Ascoris suum

<400> 230
Leu Asn Trp Ser Pro Ser Tyr
 1   5

<210> 231

<211> 16
<212> PRT
<213> Caenorhabditis elegans

<400> 231
Leu Glu Ser Phe Asn Trp Phe Ser Phe Val Ser Cys Pro Asp Ser Tyr
1   5   10   15

<210> 232
<211> 14
<212> PRT
<213> Ascoris suum

<400> 232
Ser Val Cys His Thr Pro Glu Gly Val Lys Pro Met Met Gly
1   5   10

<210> 233
<211> 6
<212> PRT
<213> Caenorhabditis elegans or Ascoris suum

<400> 233
Val His Pro Pro Met Gly
1   5

<210> 234
<211> 14
<212> PRT
<213> Caenorhabditis elegans

<400> 234
Thr Val Met His Asp Pro Met Ala Met Arg Pro Phe Met Gly
1   5   10

<210> 235
<211> 197
<212> PRT
<213> Homo sapiens

<400> 235
Ser Gly Phe Phe Asp Tyr Gly Ser Phe Ser Glu Ile Met Gln Pro Trp
1   5   10   15
Ala Gln Thr Val Val Val Gly Arg Ala Arg Leu Gly Gly Ile Pro Val
            20   25   30
Gly Val Val Ala Val Glu Thr Arg Thr Val Glu Leu Ser Val Pro Ala
         35   40   45
Asp Pro Ala Asn Leu Asp Ser Glu Ala Lys Ile Ile Gln Gln Ala Gly
      50   55   60
Gln Val Trp Phe Pro Asp Ser Ala Phe Lys Thr Tyr Gln Ala Ile Lys
65   70   75   80
Asp Phe Asn Arg Glu Gly Leu Pro Leu Met Val Phe Ala Asn Trp Arg
               85   90   95
Gly Phe Ser Gly Gly Met Lys Asp Met Tyr Asp Gln Val Leu Lys Phe
               100   105   110

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Gly Ala Tyr Ile Val Asp Gly Leu Arg Glu Cys Ser Gln Pro Val Met
        115                 120                 125
Val Tyr Ile Pro Pro Gln Ala Glu Leu Arg Gly Gly Ser Trp Val Val
    130                 135                 140
Ile Asp Pro Thr Ile Asn Pro Arg His Met Glu Met Tyr Ala Asp Arg
145                 150                 155                 160
Glu Ser Arg Gly Ser Val Leu Glu Pro Glu Gly Thr Val Glu Ile Lys
            165                 170                 175
Phe Arg Lys Lys Asp Leu Val Lys Thr Met Arg Arg Val Asp Pro Val
            180                 185                 190
Tyr Ile Arg Leu Ala
        195


<210> 236
<211> 109
<212> PRT
<213> Caenorhabditis elegans or Homo sapiens

<400> 236
Gly Asp Ser Phe Glu Ile Trp Ala Val Gly Arg Ala Arg Leu Gly Ile
 1               5                   10                  15
Pro Gly Val Val Glu Arg Val Pro Ala Asp Pro Ala Ser Gln Ala Gly
        20                  25                  30
Gln Val Trp Pro Asp Ser Ala Phe Lys Thr Ala Ile Asp Asn Glu Leu
        35                  40                  45
Pro Leu Met Ala Arg Gly Phe Ser Gly Gly Lys Asp Met Tyr Asp Val
        50                  55                  60
Leu Lys Phe Gly Ala Ile Val Asp Leu Pro Val Val Tyr Ile Pro Glu
65                  70                  75                  80
Leu Arg Gly Gly Trp Val Asp Ile Pro Ala Asp Ser Arg Gly Leu Glu
                85                  90                  95
Pro Val Ile Lys Phe Arg Lys Met Arg Asp Pro Tyr Leu
            100                 105


<210> 237
<211> 197
<212> PRT
<213> Caenorhabditis elegans

<400> 237
Thr Gly Ile Cys Asp Thr Met Ser Phe Asp Glu Ile Cys Gly Asp Trp
 1               5                   10                  15
Ala Lys Ser Ile Val Ala Gly Arg Ala Arg Leu Cys Gly Ile Pro Ile
        20                  25                  30
Gly Val Val Ser Ser Glu Phe Arg Asn Phe Ser Thr Ile Val Pro Ala
        35                  40                  45
Asp Pro Ala Ile Asp Gly Ser Gln Val Gln Asn Thr Gln Arg Ala Gly
        50                  55                  60
Gln Val Trp Tyr Pro Asp Ser Ala Phe Lys Thr Ala Glu Ala Ile Asn
65                  70                  75                  80
Asp Leu Asn Lys Glu Asn Leu Pro Leu Met Ile Ile Ala Ser Leu Arg
                85                  90                  95
Gly Phe Ser Gly Gly Gln Lys Asp Met Tyr Asp Met Val Leu Lys Phe
            100                 105                 110
Gly Ala Gln Ile Val Asp Ala Leu Ala Val Tyr Asn Arg Pro Val Ile
        115                 120                 125
Val Tyr Ile Pro Glu Ala Gly Glu Leu Arg Gly Gly Ala Trp Ala Val
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          130                     135                     140
Leu Asp Ser Lys Ile Arg Pro Glu Phe Ile His Leu Val Ala Asp Glu
145                     150                     155                     160
Lys Ser Arg Gly Gly Ile Leu Glu Pro Asn Ala Val Val Gly Ile Lys
                    165                     170                     175
Phe Arg Lys Pro Met Met Met Glu Met Met Lys Arg Ser Asp Pro Thr
                    180                     185                     190
Tyr Ser Lys Leu Ser
            195


<210> 238
<211> 124
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> (1)...(124)
<223> Xaa = Any Amino Acid

<400> 238
Val Gly Tyr Pro Val Met Ile Lys Ala Ser Glu Gly Gly Gly Gly Lys
 1               5                   10                      15
Gly Ile Arg Lys Val Asn Asn Ala Asp Asp Phe Pro Asn Leu Phe Arg
            20                      25                      30
Gln Val Gln Ala Glu Val Pro Gly Ser Pro Ile Phe Val Met Arg Leu
        35                      40                      45
Ala Lys Gln Ser Arg His Leu Glu Val Gln Ile Leu Ala Asp Gln Tyr
    50                      55                      60
Gly Asn Ala Ile Ser Leu Phe Gly Arg Asp Cys Ser Val Gln Arg Arg
65                      70                      75                      80
His Gln Lys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
                    85                      90                      95
Val Phe Glu His Met Glu Gln Cys Ala Val Lys Leu Ala Lys Met Val
                100                     105                     110
Gly Tyr Val Ser Ala Gly Thr Val Glu Tyr Leu Tyr
            115                     120


<210> 239
<211> 68
<212> PRT
<213> Homo sapiens or Caenorhabditis elegans

<400> 239
Gly Pro Met Ile Lys Ala Ser Glu Gly Gly Gly Gly Lys Gly Ile Arg
 1               5                   10                      15
Lys Asp Phe Phe Val Glu Val Gly Ser Pro Ile Phe Met Arg His Glu
            20                      25                      30
Val Gln Leu Ala Asp Tyr Asn Ile Ser Arg Asp Cys Ser Gln Arg Arg
        35                      40                      45
Gln Lys Met Ala Val Leu Ala Lys Val Gly Tyr Ser Ala Gly Thr Val
    50                      55                      60
Glu Tyr Leu Tyr
65


<210> 240
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<211> 124
<212> PRT
<213> Caenorhabditis elegans

<400> 240
Ile Gly Phe Pro Leu Met Ile Lys Ala Ser Glu Gly Gly Gly Lys
 1   5   10   15
Gly Ile Arg Lys Cys Thr Lys Val Glu Asp Phe Lys Ser Met Phe Glu
         20   25   30
Glu Val Ala Gln Glu Val Gln Gly Ser Pro Ile Phe Leu Met Lys Cys
         35   40   45
Val Asp Gly Ala Arg His Ile Glu Val Gln Leu Leu Ala Asp Arg Tyr
     50   55   60
Glu Asn Val Ile Ser Val Tyr Thr Arg Asp Cys Ser Ile Gln Arg Arg
65   70   75   80
Cys Gln Lys Ile Ile Glu Glu Ala Pro Ala Ile Ile Ala Ser Ser His
             85   90   95
Ile Arg Lys Ser Met Gln Glu Asp Ala Val Arg Leu Ala Lys Tyr Val
             100   105   110
Gly Tyr Glu Ser Ala Gly Thr Val Glu Tyr Leu Tyr
             115   120

<210> 241
<211> 116
<212> PRT
<213> Rat

<400> 241
Lys Glu Glu Gly Leu Gly Ala Glu Asn Leu Arg Gly Ser Gly Met Ile
 1   5   10   15
Ala Gly Glu Ser Ser Leu Ala Tyr Asp Glu Ile Ile Thr Ile Ser Leu
         20   25   30
Val Thr Cys Arg Ala Ile Gly Ile Gly Ala Tyr Leu Val Arg Leu Gly
         35   40   45
Gln Arg Thr Ile Gln Val Glu Asn Ser His Leu Ile Leu Thr Gly Ala
     50   55   60
Gly Ala Leu Asn Lys Val Leu Gly Arg Glu Val Tyr Thr Ser Asn Asn
65   70   75   80
Gln Leu Gly Gly Ile Gln Ile Met His Asn Asn Gly Val Thr His Cys
             85   90   95
Thr Val Cys Asp Asp Phe Glu Gly Val Phe Thr Val Leu His Trp Leu
             100   105   110
Ser Tyr Met Pro
         115

<210> 242
<211> 65
<212> PRT
<213> Caenorhabditis elegans or Rat

<400> 242
Lys Glu Gly Glu Asn Leu Gly Ser Gly Ile Ala Gly Glu Ala Tyr Glu
 1   5   10   15
Thr Val Thr Arg Gly Ile Gly Ala Tyr Arg Leu Arg Gln Ser His Leu
         20   25   30
Ile Leu Thr Gly Ala Leu Asn Leu Gly Val Tyr Thr Ser Asn Asn Gln
         35   40   45

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Leu Gly Gly Met Asn Gly Val Thr His Val Asp Glu Gly Val Trp Ser
    50   55   60
Pro
65

<210> 243
<211> 116
<212> PRT
<213> Caenorhabditis elegans

<400> 243
Lys Asn Glu Lys Ile Gly Val Glu Asn Leu Gln Gly Ser Gly Leu Ile
 1   5   10   15
Ala Gly Glu Thr Ala Arg Ala Tyr Ala Glu Val Pro Thr Tyr Cys Tyr
            20   25   30
Val Thr Gly Arg Ser Val Gly Ile Gly Ala Tyr Thr Ala Arg Leu Ala
            35   40   45
His Arg Ile Val Gln His Lys Gln Ser His Leu Ile Leu Thr Gly Tyr
    50   55   60
Glu Ala Leu Asn Thr Leu Leu Gly Lys Lys Val Tyr Thr Ser Asn Asn
65   70   75   80
Gln Leu Gly Gly Pro Glu Val Met Phe Arg Asn Gly Val Thr His Ala
                85   90   95
Val Val Asp Asn Asp Leu Glu Gly Ile Ala Lys Val Ile Arg Trp Met
                100   105   110
Ser Phe Leu Pro
            115

<210> 244
<211> 119
<212> PRT
<213> Homo sapiens

<400> 244
His Val Ile Ala Ala Arg Ile Thr Ser Glu Asn Pro Asp Glu Gly Phe
 1   5   10   15
Lys Pro Ser Ser Gly Thr Val Gln Glu Leu Asn Phe Arg Ser Asn Lys
            20   25   30
Asn Val Trp Gly Tyr Phe Ser Val Ala Ala Ala Gly Gly Leu His Glu
            35   40   45
Phe Ala Asp Ser Gln Phe Gly His Cys Phe Ser Trp Gly Glu Asn Arg
    50   55   60
Glu Glu Ala Ile Ser Asn Met Val Val Ala Leu Lys Glu Leu Ser Ile
65   70   75   80
Arg Gly Asp Phe Arg Thr Thr Val Glu Tyr Leu Ile Lys Leu Leu Glu
                85   90   95
Thr Glu Ser Phe Gln Leu Asn Arg Ile Asp Thr Gly Trp Leu Asp Arg
                100   105   110
Leu Ile Ala Glu Lys Val Gln
            115

<210> 245
<211> 59
<212> PRT
<213> Caenorhabditis elegans or Homo sapiens

<400> 245

His Ile Ala Ala Arg Ile Thr Glu Asn Pro Asp Phe Pro Ser Gly Val
1   5   10   15
Glu Asn Phe Ser Trp Tyr Phe Ser Val His Phe Ala Asp Ser Gln Phe
            20   25   30
Gly His Phe Gly Arg Glu Ala Met Leu Lys Ile Arg Phe Thr Val Tyr
            35   40   45
Leu Leu Phe Asn Thr Trp Leu Asp Ile Ala Lys
    50   55

<210> 246
<211> 119
<212> PRT
<213> Caenorhabditis elegans

<400> 246

His Ala Ile Ala Ala Arg Ile Thr Cys Glu Asn Pro Asp Asp Ser Phe
1   5   10   15
Arg Pro Ser Thr Gly Lys Val Tyr Glu Ile Asn Phe Pro Ser Ser Gln
            20   25   30
Asp Ala Trp Ala Tyr Phe Ser Val Gly Arg Gly Ser Ser Val His Gln
            35   40   45
Phe Ala Asp Ser Gln Phe Gly His Ile Phe Thr Arg Gly Thr Ser Arg
    50   55   60
Thr Glu Ala Met Asn Thr Met Cys Ser Thr Leu Lys His Met Thr Ile
65   70   75   80
Arg Ser Ser Phe Pro Thr Gln Val Asn Tyr Leu Val Asp Leu Met His
            85   90   95
Asp Ala Asp Phe Ile Asn Asn Ala Phe Asn Thr Gln Trp Leu Asp Lys
            100   105   110
Arg Ile Ala Met Lys Ile Lys
            115

<210> 247
<211> 90
<212> PRT
<213> Rat

<400> 247

Pro Gly Gly Ala Asn Asn Asn Asn Tyr Ala Asn Val Glu Leu Ile Leu
1   5   10   15
Asp Ile Ala Lys Arg Ile Pro Val Gln Ala Val Trp Ala Gly Trp Gly
            20   25   30
His Ala Ser Glu Asn Pro Lys Leu Pro Glu Leu Leu Leu Lys Asn Gly
            35   40   45
Ile Ala Phe Met Gly Pro Pro Ser Gln Ala Met Trp Ala Leu Gly Asp
    50   55   60
Lys Ile Ala Ser Ser Ile Val Ala Gln Thr Ala Gly Ile Pro Thr Leu
65   70   75   80
Pro Trp Ser Gly Ser Gly Leu Arg Val Asp
            85   90

<210> 248
<211> 55
<212> PRT
<213> Caenorhabditis elegans or Rat

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<400> 248
Pro Gly Asn Asn Asn Ala Asn Val Ile Leu Ala Val Ala Val Trp Ala
1   5   10   15
Gly Trp Gly His Ala Ser Glu Asn Pro Leu Pro Leu Ile Ala Phe Gly
            20   25   30
Pro Pro Ala Met Leu Gly Asp Lys Ile Ala Ser Ile Ala Gln Thr Gly
        35   40   45
Pro Thr Trp Ser Gly Ser Gly
    50   55

<210> 249
<211> 90
<212> PRT
<213> Caenorhabditis elegans

<400> 249
Pro Ser Gly Thr Asn Lys Asn Asn Phe Ala Asn Val Asp Glu Ile Leu
1   5   10   15
Lys His Ala Ile Lys Tyr Glu Val Asp Ala Val Trp Ala Gly Trp Gly
            20   25   30
His Ala Ser Glu Asn Pro Asp Leu Pro Arg Arg Leu Asn Asp His Asn
        35   40   45
Ile Ala Phe Ile Gly Pro Pro Ala Ser Ala Met Phe Ser Leu Gly Asp
    50   55   60
Lys Ile Ala Ser Thr Ile Ile Ala Gln Thr Val Gly Val Pro Thr Val
65   70   75   80
Ala Trp Ser Gly Ser Gly Ile Thr Met Glu
                85   90

<210> 250
<211> 67
<212> PRT
<213> Caenorhabditis elegans

<400> 250
Val Ile Lys Asn Leu Gly Tyr Met Val Asp Asn His Gly Phe Val Pro
1   5   10   15
Asn Gly Gly Arg Val Tyr Tyr Leu Thr Arg Ser Gln Pro Pro Leu Leu
            20   25   30
Thr Pro Met Val Tyr Glu Tyr Tyr Met Ser Thr Gly Asp Leu Asp Phe
        35   40   45
Val Met Glu Ile Leu Pro Thr Leu Asp Lys Glu Tyr Glu Phe Trp Ile
    50   55   60
Lys Asn Arg
65

<210> 251
<211> 36
<212> PRT
<213> Caenorhabditis elegans

<400> 251
Ile Asn Gly Phe Val Pro Asn Gly Gly Arg Val Tyr Tyr Leu Arg Ser
1   5   10   15
Gln Pro Pro Pro Met Val Tyr Glu Tyr Tyr Thr Asp Val Pro Lys Glu
            20   25   30

Tyr Phe Trp Arg
        35

<210> 252
<211> 67
<212> PRT
<213> Caenorhabditis elegans

<400> 252
Met Ile Leu Asn Phe Ala His Ile Ile Glu Thr Tyr Gly Phe Val Pro
 1   5   10   15
Asn Gly Gly Arg Val Tyr Tyr Leu Arg Arg Ser Gln Pro Pro Phe Phe
            20   25   30
Ala Pro Met Val Tyr Glu Tyr Tyr Leu Ala Thr Gln Asp Ile Gln Leu
        35   40   45
Val Ala Asp Leu Ile Pro Val Ile Glu Lys Glu Tyr Thr Phe Trp Ser
    50   55   60
Glu Arg Arg
65

<210> 253
<211> 92
<212> PRT
<213> Caenorhabditis elegans

<400> 253
Met Asp Ser Ile Arg Thr Trp Ser Ile Ile Pro Ala Asp Leu Asn Ala
 1   5   10   15
Phe Met Cys Ala Asn Ala Arg Ile Leu Ala Ser Leu Tyr Glu Ile Ala
            20   25   30
Gly Asp Phe Lys Lys Val Lys Val Phe Glu Gln Arg Tyr Thr Trp Ala
        35   40   45
Lys Arg Glu Met Arg Glu Leu His Trp Asn Glu Thr Asp Gly Ile Trp
    50   55   60
Tyr Asp Tyr Asp Ile Glu Leu Lys Thr His Ser Asn Gln Tyr Tyr Val
65   70   75   80
Ser Asn Ala Val Pro Leu Tyr Ala Lys Cys Tyr Asp
                85   90

<210> 254
<211> 32
<212> PRT
<213> Caenorhabditis elegans

<400> 254
Ile Thr Ile Pro Asp Leu Asn Ala Phe Cys Asn Ile Tyr Gly Lys Arg
 1   5   10   15
Thr Trp Tyr Asp Tyr Thr His Ser Asn Ala Val Pro Leu Cys Tyr Asp
            20   25   30

<210> 255
<211> 92
<212> PRT
<213> Caenorhabditis elegans

<400> 255
Ile Ser Thr Ile Glu Thr Thr Asn Ile Val Pro Val Asp Leu Asn Ala
1   5   10   15
Phe Leu Cys Tyr Asn Met Asn Ile Met Gln Leu Phe Tyr Lys Leu Thr
            20   25   30
Gly Asn Pro Leu Lys His Leu Glu Trp Ser Ser Arg Phe Thr Asn Phe
            35   40   45
Arg Glu Ala Phe Thr Lys Val Phe Tyr Val Pro Ala Arg Lys Gly Trp
        50   55   60
Tyr Asp Tyr Asn Leu Arg Thr Leu Thr His Asn Thr Asp Phe Phe Ala
65   70   75   80
Ser Asn Ala Val Pro Leu Phe Ser Gln Cys Tyr Asp
                85   90

<210> 256
<211> 102
<212> PRT
<213> Caenorhabditis elegans

<400> 256
Val His Asp Tyr Leu Glu Arg Gln Gly Leu Leu Lys Tyr Thr Lys Gly
1   5   10   15
Leu Pro Thr Ser Leu Ala Met Ser Ser Thr Gln Gln Trp Asp Lys Glu
            20   25   30
Asn Ala Trp Pro Pro Met Ile His Met Val Ile Glu Gly Phe Arg Thr
            35   40   45
Thr Gly Asp Ile Lys Leu Met Lys Val Ala Glu Lys Met Ala Thr Ser
        50   55   60
Trp Leu Thr Gly Thr Tyr Gln Ser Phe Ile Arg Thr His Ala Met Phe
65   70   75   80
Glu Lys Tyr Asn Val Thr Pro His Thr Glu Glu Thr Ser Gly Gly Gly
                85   90   95
Gly Gly Glu Tyr Glu Val
            100

<210> 257
<211> 37
<212> PRT
<213> Caenorhabditis elegans

<400> 257
Val Gly Gly Pro Thr Ser Gln Gln Trp Asp Asn Trp Pro Met His Met
1   5   10   15
Ile Glu Gly Arg Leu Ala Ala Trp Leu Gln Phe Met Glu Lys Tyr Asn
            20   25   30
Val Gly Gly Glu Val
            35

<210> 258
<211> 102
<212> PRT
<213> Caenorhabditis elegans

<400> 258
Val Tyr Asn Glu Met Gln Asn Ser Gly Ala Phe Ser Ile Pro Gly Gly
1   5   10   15

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Ile Pro Thr Ser Met Asn Glu Glu Thr Asn Gln Gln Trp Asp Phe Pro
            20   25   30
Asn Gly Trp Ser Pro Met Asn His Met Ile Ile Glu Gly Leu Arg Lys
            35   40   45
Ser Asn Asn Pro Ile Leu Gln Gln Lys Ala Phe Thr Leu Ala Glu Lys
        50   55   60
Trp Leu Glu Thr Asn Met Gln Thr Phe Asn Val Ser Asp Glu Met Trp
65   70   75   80
Glu Lys Tyr Asn Val Lys Glu Pro Leu Gly Lys Leu Ala Thr Gly Gly
                85   90   95
Glu Tyr Glu Val Gln Val
                100

<210> 259
<211> 58
<212> PRT
<213> Caenorhabditis elegans

<400> 259
Tyr Gln Tyr Lys Ala Lys Leu Lys Val Pro Arg Pro Glu Ser Tyr Arg
 1   5   10   15
Glu Asp Ser Glu Leu Ala Glu His Leu Gln Thr Glu Ala Glu Lys Ile
            20   25   30
Gln Met Trp Ser Glu Ile Ala Ser Ala Ala Glu Thr Gly Trp Asp Phe
            35   40   45
Ser Thr Arg Trp Phe Ser Gln Asn Gly Asp
        50   55

<210> 260
<211> 29
<212> PRT
<213> Caenorhabditis elegans

<400> 260
Gln Tyr Pro Arg Pro Glu Ser Arg Glu Asp Ala Glu His Thr Lys Gln
 1   5   10   15
Ser Ala Ala Glu Gly Trp Asp Phe Ser Arg Trp Phe Asp
            20   25

<210> 261
<211> 58
<212> PRT
<213> Caenorhabditis elegans

<400> 261
Phe Gln Tyr Arg Thr Glu Ala Glu Thr Pro Arg Pro Glu Ser Phe Arg
 1   5   10   15
Glu Asp Val Leu Ser Ala Glu His Phe Thr Thr Lys Asp Arg Lys Lys
            20   25   30
Gln Phe Phe Lys Asp Leu Gly Ser Ala Ala Glu Ser Gly Trp Asp Phe
        35   40   45
Ser Ser Arg Trp Phe Lys Asn His Lys Asp
        50   55

<210> 262

<211> 21
<212> PRT
<213> Caenorhabditis elegans

<400> 262
Gln Thr Gly Phe Gly Trp Thr Asn Gly Val Ile Leu Asp Leu Leu Asp
 1   5   10   15
Lys Tyr Gly Asp Gln
            20

<210> 263
<211> 13
<212> PRT
<213> Caenorhabditis elegans

<400> 263
Gln Gly Phe Gly Trp Thr Asn Gly Leu Asp Leu Tyr Asp
 1   5   10

<210> 264
<211> 21
<212> PRT
<213> Caenorhabditis elegans

<400> 264
Gln Ala Gly Phe Gly Trp Thr Asn Gly Ala Ala Leu Asp Leu Ile Phe
 1   5   10   15
Thr Tyr Ser Asp Arg
            20

<210> 265
<211> 24
<212> PRT
<213> Caenorhabditis elegans

<400> 265
Ser Ser Ser Thr Ala Ser Lys Phe Ser Phe Ser Leu Ser Asn Ile Thr
 1   5   10   15
Phe Val Val Phe Ile Leu Tyr Ile
            20

<210> 266
<211> 10
<212> PRT
<213> Caenorhabditis elegans

<400> 266
Ser Ser Ser Phe Ser Val Phe Leu Tyr Ile
 1   5   10

<210> 267
<211> 24
<212> PRT
<213> Caenorhabditis elegans

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<400> 267
Thr Ser Ser Ser Ser Ser Thr Phe Gly Tyr Ser Asn Ile Leu Thr Leu
 1               5                   10                  15
Ile Thr Val Phe Val Leu Tyr Ile
            20


<210> 268
<211> 7
<212> PRT
<213> Caenorhabditis elegans

<400> 268
Gly Gly Glu Tyr Glu Val Gln
 1               5


<210> 269
<211> 7
<212> PRT
<213> Caenorhabditis elegans

<400> 269
Gly Gly Glu Tyr Glu Val Gln
 1               5


<210> 270
<211> 7
<212> PRT
<213> Caenorhabditis elegans

<400> 270
Gly Gly Glu Tyr Glu Val Gln
 1               5


<210> 271
<211> 18
<212> PRT
<213> Caenorhabditis elegans

<400> 271
Lys Thr His Ser Asn Gln Tyr Tyr Val Ser Asn Ala Val Pro Leu Tyr
 1               5                   10                  15
Ala Lys


<210> 272
<211> 8
<212> PRT
<213> Caenorhabditis elegans

<400> 272
Lys Tyr Tyr Val Ser Pro Tyr Lys
 1               5
```

<210> 273
<211> 18
<212> PRT
<213> Caenorhabditis elegans

<400> 273
Lys Phe Thr Ala His Pro Tyr Tyr Val Ser Arg Thr Pro Pro Arg Tyr
1   5   10   15
His Lys

<210> 274
<211> 67
<212> PRT
<213> Caenorhabditis elegans

<400> 274
Val Ile Lys Asn Leu Gly Tyr Met Val Asp Asn His Gly Phe Val Pro
1   5   10   15
Asn Gly Gly Arg Val Tyr Tyr Leu Thr Arg Ser Gln Pro Pro Leu Leu
            20   25   30
Thr Pro Met Val Tyr Glu Tyr Tyr Met Ser Thr Gly Asp Leu Asp Phe
        35   40   45
Val Met Glu Ile Leu Pro Thr Leu Asp Lys Glu Tyr Glu Phe Trp Ile
    50   55   60
Lys Asn Arg
65

<210> 275
<211> 43
<212> PRT
<213> Caenorhabditis elegans

<400> 275
Ile Asn Leu Met Val Asp Gly Phe Val Pro Asn Gly Gly Arg Val Tyr
1   5   10   15
Tyr Leu Arg Ser Gln Pro Pro Leu Met Val Tyr Glu Tyr Thr Asp Phe
            20   25   30
Val Glu Leu Pro Thr Leu Lys Glu Phe Trp Arg
        35   40

<210> 276
<211> 67
<212> PRT
<213> Caenorhabditis elegans

<400> 276
Met Ile Arg Asn Leu Ala Ser Met Val Asp Lys Tyr Gly Phe Val Pro
1   5   10   15
Asn Gly Gly Arg Val Tyr Tyr Leu Gln Arg Ser Gln Pro Pro Phe Leu
            20   25   30
Ala Ala Met Val Tyr Glu Leu Tyr Glu Ala Thr Asn Asp Lys Ala Phe
        35   40   45
Val Ala Glu Leu Leu Pro Thr Leu Leu Lys Glu Leu Asn Phe Trp Asn
    50   55   60
Glu Lys Arg

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65

<210> 277
<211> 84
<212> PRT
<213> Caenorhabditis elegans

<400> 277
Ile Ile Pro Ala Asp Leu Asn Ala Phe Met Cys Ala Asn Ala Arg Ile
1   5   10   15
Leu Ala Ser Leu Tyr Glu Ile Ala Gly Asp Phe Lys Lys Val Lys Val
            20   25   30
Phe Glu Gln Arg Tyr Thr Trp Ala Lys Arg Glu Met Arg Glu Leu His
        35   40   45
Trp Asn Glu Thr Asp Gly Ile Trp Tyr Asp Tyr Asp Ile Glu Leu Lys
    50   55   60
Thr His Ser Asn Gln Tyr Tyr Val Ser Asn Ala Val Pro Leu Tyr Ala
65   70   75   80
Lys Cys Tyr Asp

<210> 278
<211> 31
<212> PRT
<213> Caenorhabditis elegans

<400> 278
Pro Asp Leu Asn Cys Asn Ile Leu Tyr Glu Gly Asp Lys Phe Asn Thr
1   5   10   15
Asp Gly Trp Tyr Asp Tyr His Tyr Ser Ala Val Pro Leu Cys Tyr
            20   25   30

<210> 279
<211> 84
<212> PRT
<213> Caenorhabditis elegans

<400> 279
Val Leu Pro Val Asp Leu Asn Gly Leu Leu Cys Trp Asn Met Asp Ile
1   5   10   15
Met Glu Tyr Leu Tyr Glu Gln Ile Gly Asp Thr Lys Asn Ser Gln Ile
            20   25   30
Phe Arg Asn Lys Arg Ala Asp Phe Arg Asp Thr Val Gln Asn Val Phe
        35   40   45
Tyr Asn Arg Thr Asp Gly Thr Trp Tyr Asp Tyr Asn Leu Arg Thr Gln
    50   55   60
Ser His Asn Pro Arg Phe Tyr Thr Ser Thr Ala Val Pro Leu Phe Thr
65   70   75   80
Asn Cys Tyr Asn

<210> 280
<211> 48
<212> PRT
<213> Caenorhabditis elegans

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<400> 280
Tyr Leu Glu Arg Gln Gly Leu Leu Lys Tyr Thr Lys Gly Leu Pro Thr
1   5   10   15
Ser Leu Ala Met Ser Ser Thr Gln Gln Trp Asp Lys Glu Asn Ala Trp
            20   25   30
Pro Pro Met Ile His Met Val Ile Glu Gly Phe Arg Thr Thr Gly Asp
        35   40   45

<210> 281
<211> 20
<212> PRT
<213> Caenorhabditis elegans

<400> 281
Gly Tyr Gly Pro Thr Ser Ser Gln Gln Trp Asp Asn Trp Pro His Met
1   5   10   15
Ile Glu Gly Arg
            20

<210> 282
<211> 48
<212> PRT
<213> Caenorhabditis elegans

<400> 282
Phe Phe Gln Lys Met Gly Val Phe Thr Tyr Pro Gly Gly Ile Pro Thr
1   5   10   15
Ser Met Ser Gln Glu Ser Asp Gln Gln Trp Asp Phe Pro Asn Gly Trp
            20   25   30
Ser Pro Asn Asn His Met Ile Ile Glu Gly Leu Arg Lys Ser Ala Asn
        35   40   45

<210> 283
<211> 18
<212> PRT
<213> Caenorhabditis elegans

<400> 283
Glu Ile Ala Ser Ala Ala Glu Thr Gly Trp Asp Phe Ser Thr Arg Trp
1   5   10   15
Phe Ser

<210> 284
<211> 15
<212> PRT
<213> Caenorhabditis elegans

<400> 284
Ala Ser Ala Ala Glu Gly Trp Asp Phe Ser Thr Arg Trp Phe Ser
1   5   10   15

<210> 285
<211> 18

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<212> PRT
<213> Caenorhabditis elegans

<400> 285
Asp Leu Ala Ser Ala Ala Glu Ser Gly Trp Asp Phe Ser Thr Arg Trp
 1   5   10   15
Phe Ser

<210> 286
<211> 40
<212> PRT
<213> Caenorhabditis elegans

<400> 286
Lys Gln Phe Pro Tyr Tyr Gln Tyr Lys Ala Lys Leu Lys Val Pro Arg
 1   5   10   15
Pro Glu Ser Tyr Arg Glu Asp Ser Glu Leu Ala Glu His Leu Gln Thr
            20   25   30
Glu Ala Glu Lys Ile Gln Met Trp
         35   40

<210> 287
<211> 18
<212> PRT
<213> Caenorhabditis elegans

<400> 287
Lys Phe Tyr Gln Tyr Lys Val Pro Arg Pro Glu Ser Tyr Arg Asp Leu
 1   5   10   15
Ala Gln

<210> 288
<211> 40
<212> PRT
<213> Caenorhabditis elegans

<400> 288
Lys Ser Phe Lys Val Tyr Gln Tyr Lys Thr Ala Ser Asn Val Pro Arg
 1   5   10   15
Pro Glu Ser Tyr Arg Val Asp Thr Gln Asn Ser Ala Lys Leu Ala Asn
            20   25   30
Gly Ala Asp Gln Gln Gln Phe Tyr
         35   40

<210> 289
<211> 21
<212> PRT
<213> Caenorhabditis elegans

<400> 289
Gln Thr Gly Phe Gly Trp Thr Asn Gly Val Ile Leu Asp Leu Leu Asp
 1   5   10   15
Lys Tyr Gly Asp Gln

<210> 290
<211> 14
<212> PRT
<213> Caenorhabditis elegans

<400> 290
Gln Gly Phe Gly Trp Asn Gly Ile Leu Asp Leu Leu Tyr Asp
1   5   10

<210> 291
<211> 21
<212> PRT
<213> Caenorhabditis elegans

<400> 291
Gln Asp Gly Phe Gly Trp Ser Asn Gly Ala Ile Leu Asp Leu Leu Leu
1   5   10   15
Thr Tyr Asn Asp Arg
            20

<210> 292
<211> 27
<212> PRT
<213> Caenorhabditis elegans

<400> 292
Tyr Gly Asp Gln Phe Ala Ser Ser Ser Thr Ala Ser Lys Phe Ser Phe
1   5   10   15
Ser Leu Ser Asn Ile Thr Phe Val Val Phe Ile
            20   25

<210> 293
<211> 11
<212> PRT
<213> Caenorhabditis elegans

<400> 293
Tyr Phe Ala Ser Ser Ser Ala Ser Phe Ser Phe
1   5   10

<210> 294
<211> 26
<212> PRT
<213> Caenorhabditis elegans

<400> 294
Tyr Asn Pro Phe Ala Ser Ser Ser Asp Ala Ser Ser Cys Pro Phe Ser
1   5   10   15
Thr Asn Ser Val Ile Phe Ser Ile Leu Val
            20   25

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<210> 295
<211> 9
<212> PRT
<213> Caenorhabditis elegans

<400> 295
Gly Gly Gly Gly Glu Tyr Glu Val Gln
 1               5


<210> 296
<211> 7
<212> PRT
<213> Caenorhabditis elegans

<400> 296
Gly Gly Gly Glu Tyr Val Gln
 1               5


<210> 297
<211> 9
<212> PRT
<213> Caenorhabditis elegans

<400> 297
Gly Ser Gly Gly Glu Tyr Asp Val Gln
 1               5


<210> 298
<211> 14
<212> PRT
<213> Caenorhabditis elegans

<400> 298
Asn Gln Tyr Tyr Val Ser Asn Ala Val Pro Leu Tyr Ala Lys
 1               5                  10


<210> 299
<211> 7
<212> PRT
<213> Caenorhabditis elegans

<400> 299
Asn Tyr Tyr Val Leu Tyr Lys
 1               5


<210> 300
<211> 14
<212> PRT
<213> Caenorhabditis elegans

<400> 300
Asn His Tyr Tyr Ile Ile Gln Met Val Ser Leu Tyr Thr Lys
 1               5                  10
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<210> 301
<211> 30
<212> PRT
<213> Caenorhabditis elegans

<400> 301
Asp Gln Phe Ala Ser Ser Ser Thr Ala Ser Lys Phe Ser Phe Ser Leu
1   5   10   15
Ser Asn Ile Thr Phe Val Val Phe Ile Leu Tyr Ile Phe Ser
            20   25   30

<210> 302
<211> 11
<212> PRT
<213> Caenorhabditis elegans

<400> 302
Asp Gln Phe Ser Ser Lys Phe Ser Phe Ser
1   5   10

<210> 303
<211> 30
<212> PRT
<213> Caenorhabditis elegans

<400> 303
Asp Gln Phe Val Ile Ser Phe Ile Cys Ser Lys Phe Ser Ser Lys Asn
1   5   10   15
Lys Lys Leu Tyr Phe Cys Pro Ser His Phe Ser Leu Phe Ser
            20   25   30

<210> 304
<211> 9
<212> PRT
<213> Caenorhabditis elegans

<220>
<221> VARIANT
<222> (1)...(9)
<223> Xaa = Any Amino Acid

<400> 304
Gly Trp Asp Xaa Xaa Ile Ala Pro Lys
1   5

<210> 305
<211> 62
<212> PRT
<213> Mus musculus

<400> 305
Leu Cys Lys Glu Gly Ile Ser Asp Gly Ala Thr Met Lys Thr Phe Cys
1   5   10   15
Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val Leu Glu Asp Asn Asp Tyr
            20   25   30

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Gly Arg Ala Val Asp Trp Trp Gly Leu Gly Val Val Met Tyr Glu Met
        35                  40                  45
Met Cys Gly Arg Leu Pro Phe Tyr Asn Gln Asp His Glu Arg
    50                  55                  60


<210> 306
<211> 9
<212> PRT
<213> Caenorhabditis elegans

<400> 306
Gln Ala Leu Thr Gln Met Asn Pro Lys
 1               5


<210> 307
<211> 11
<212> PRT
<213> Caenorhabditis elegans

<400> 307
Gln Ala Leu Thr Gln Cys Val Asp Ser Met Arg
 1               5                   10


<210> 308
<211> 248
<212> PRT
<213> Caenorhabditis elegans

<400> 308
Ile Phe Arg Thr Ala Val Ser Ser Asn Arg Cys Arg Thr Glu Tyr Gln
 1               5                   10                  15
Asn Ile Asp Leu Asp Cys Ala Tyr Ile Thr Asp Arg Ile Ile Ala Ile
            20                  25                  30
Gly Tyr Pro Ala Thr Gly Ile Glu Ala Asn Phe Arg Asn Ser Lys Val
        35                  40                  45
Gln Thr Gln Gln Phe Leu Thr Arg Arg His Gly Lys Gly Asn Val Lys
    50                  55                  60
Val Phe Asn Leu Arg Gly Gly Tyr Tyr Tyr Asp Ala Asp Asn Phe Asp
65                  70                  75                  80
Gly Asn Val Ile Cys Phe Asp Met Thr Asp His His Pro Pro Ser Leu
                85                  90                  95
Glu Leu Met Ala Pro Phe Cys Arg Glu Ala Lys Glu Trp Leu Glu Ala
            100                 105                 110
Asp Asp Lys His Val Ile Ala Val His Cys Lys Ala Gly Lys Gly Arg
        115                 120                 125
Thr Gly Val Met Ile Cys Ala Leu Leu Ile Tyr Ile Asn Phe Tyr Pro
    130                 135                 140
Ser Pro Arg Gln Ile Leu Asp Tyr Tyr Ser Ile Ile Thr Arg Lys Asn
145                 150                 155                 160
Asn Lys Gly Val Thr Ile Pro Ser Gln Arg Arg Tyr Ile Tyr Tyr Tyr
                165                 170                 175
His Lys Leu Arg Glu Arg Glu Leu Asn Tyr Leu Pro Leu Arg Met Gln
            180                 185                 190
Leu Ile Gly Val Tyr Val Glu Arg Pro Pro Lys Thr Trp Gly Gly Gly
        195                 200                 205
Ser Lys Ile Lys Val Glu Val Gly Asn Gly Ser Thr Ile Leu Phe Lys
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            210                     215                     220
Pro Asp Pro Leu Ile Ile Ser Lys Ser Asn His Gln Arg Glu Arg Ala
225                     230                     235                     240
Thr Trp Leu Asn Asn Cys Asp Thr
                        245


<210> 309
<211> 249
<212> PRT
<213> Homo sapiens

<400> 309
Ile Ile Lys Glu Ile Val Ser Arg Asn Lys Arg Arg Tyr Gln Glu Asp
 1               5                       10                      15
Gly Phe Asp Leu Asp Leu Thr Tyr Ile Tyr Pro Asn Ile Ile Ala Met
            20                      25                      30
Gly Phe Pro Ala Glu Arg Leu Glu Gly Val Tyr Arg Asn Asn Ile Asp
            35                      40                      45
Asp Val Val Arg Phe Leu Asp Ser Lys His Lys Asn His Tyr Lys Ile
        50                      55                      60
Tyr Asn Leu Cys Ala Glu Arg His Tyr Asp Thr Ala Lys Phe Asn Cys
65                      70                      75                      80
Arg Val Ala Gln Tyr Pro Phe Glu Asp His Asn Pro Pro Gln Leu Glu
                85                      90                      95
Leu Ile Lys Pro Phe Cys Glu Asp Leu Asp Gln Trp Leu Ser Glu Asp
            100                     105                     110
Asp Asn His Val Ala Ala Ile His Cys Lys Ala Gly Lys Gly Arg Thr
            115                     120                     125
Gly Val Met Ile Cys Ala Tyr Leu Leu His Arg Gly Lys Phe Leu Lys
        130                     135                     140
Ala Gln Glu Ala Leu Asp Phe Tyr Gly Glu Val Arg Thr Arg Asp Lys
145                     150                     155                     160
Lys Gly Val Thr Ile Pro Ser Gln Arg Arg Tyr Val Tyr Tyr Tyr Ser
                165                     170                     175
Tyr Leu Leu Lys Asn His Leu Asp Tyr Arg Pro Val Ala Leu Leu Phe
            180                     185                     190
His Lys Met Met Phe Glu Thr Ile Pro Met Phe Ser Gly Gly Thr Cys
            195                     200                     205
Asn Pro Gln Phe Val Val Cys Gln Leu Lys Val Lys Ile Tyr Ser Ser
        210                     215                     220
Asn Ser Gly Pro Thr Arg Arg Glu Asp Lys Phe Asn Tyr Phe Glu Phe
225                     230                     235                     240
Pro Gln Pro Leu Pro Val Cys Gly Asp
                        245


<210> 310
<211> 962
<212> PRT
<213> Caenorhabditis elegans

<400> 310
Met Val Thr Pro Pro Pro Asp Val Pro Ser Thr Ser Thr Arg Ser Met
 1               5                       10                      15
Ala Arg Asp Leu Gln Glu Asn Pro Asn Arg Gln Pro Gly Glu Pro Arg
            20                      25                      30
Val Ser Glu Pro Tyr His Asn Ser Ile Val Glu Arg Ile Arg His Ile
            35                      40     .               45
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Phe Arg Thr Ala Val Ser Ser Asn Arg Cys Arg Thr Glu Tyr Gln Asn
    50                      55                      60
Ile Asp Leu Asp Cys Ala Tyr Ile Thr Asp Arg Ile Ile Ala Ile Gly
65                      70                      75                      80
Tyr Pro Ala Thr Gly Ile Glu Ala Asn Phe Arg Asn Ser Lys Val Gln
                85                      90                      95
Thr Gln Gln Phe Leu Thr Arg Arg His Gly Lys Gly Asn Val Lys Val
            100                     105                     110
Phe Asn Leu Arg Gly Gly Tyr Tyr Tyr Asp Ala Asp Asn Phe Asp Gly
        115                     120                     125
Asn Val Ile Cys Phe Asp Met Thr Asp His His Pro Pro Ser Leu Glu
    130                     135                     140
Leu Met Ala Pro Phe Cys Arg Glu Ala Lys Glu Trp Leu Glu Ala Asp
145                     150                     155                     160
Asp Lys His Val Ile Ala Val His Cys Lys Ala Gly Lys Gly Arg Thr
                165                     170                     175
Gly Val Met Ile Cys Ala Leu Leu Ile Tyr Ile Asn Phe Tyr Pro Ser
                180                     185                     190
Pro Arg Gln Ile Leu Asp Tyr Tyr Ser Ile Ile Arg Thr Lys Asn Asn
            195                     200                     205
Lys Gly Val Thr Ile Pro Ser Gln Arg Arg Tyr Ile Tyr Tyr Tyr His
    210                     215                     220
Lys Leu Arg Glu Arg Glu Leu Asn Tyr Leu Pro Leu Arg Met Gln Leu
225                     230                     235                     240
Ile Gly Val Tyr Val Glu Arg Pro Pro Lys Thr Trp Gly Gly Gly Ser
                245                     250                     255
Lys Ile Lys Val Glu Val Gly Asn Gly Ser Thr Ile Leu Phe Lys Pro
                260                     265                     270
Asp Pro Leu Ile Ile Ser Lys Ser Asn His Gln Arg Glu Arg Ala Thr
            275                     280                     285
Trp Leu Asn Asn Cys Asp Thr Pro Asn Glu Phe Asp Thr Gly Glu Gln
    290                     295                     300
Lys Tyr His Gly Phe Val Ser Lys Arg Ala Tyr Cys Phe Met Val Pro
305                     310                     315                     320
Glu Asp Ala Pro Val Phe Val Glu Gly Asp Val Arg Ile Asp Ile Arg
                325                     330                     335
Glu Ile Gly Phe Leu Lys Lys Phe Ser Asp Gly Lys Ile Gly His Val
            340                     345                     350
Trp Phe Asn Thr Met Phe Ala Cys Asp Gly Gly Leu Asn Gly Gly His
    355                     360                     365
Phe Glu Tyr Val Asp Lys Thr Gln Pro Tyr Ile Gly Asp Asp Thr Ser
    370                     375                     380
Ile Gly Arg Lys Asn Gly Met Arg Arg Asn Glu Thr Pro Met Arg Lys
385                     390                     395                     400
Ile Asp Pro Glu Thr Gly Asn Glu Phe Glu Ser Pro Trp Gln Ile Val
            405                     410                     415
Asn Pro Pro Gly Leu Glu Lys His Ile Thr Glu Glu Gln Ala Met Glu
            420                     425                     430
Asn Tyr Thr Asn Tyr Gly Met Ile Pro Pro Arg Tyr Thr Ile Ser Lys
        435                     440                     445
Ile Leu His Glu Lys His Glu Lys Gly Ile Val Lys Asp Asp Tyr Asn
    450                     455                     460
Asp Arg Lys Leu Pro Met Gly Asp Lys Ser Tyr Thr Glu Ser Gly Lys
465                     470                     475                     480
Ser Gly Asp Ile Arg Gly Val Gly Gly Pro Phe Glu Ile Pro Tyr Lys
                485                     490                     495
Ala Glu Glu His Val Leu Thr Phe Pro Val Tyr Glu Met Asp Arg Ala
            500                     505                     510
Leu Lys Ser Lys Asp Leu Asn Asn Gly Met Lys Leu His Val Val Leu
```

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               515                        520                        525
Arg Cys Val Asp Thr Arg Asp Ser Lys Met Met Glu Lys Ser Glu Val
    530                        535                        540
Phe Gly Asn Leu Ala Phe His Asn Glu Ser Thr Arg Arg Leu Gln Ala
545                        550                        555                        560
Leu Thr Gln Met Asn Pro Lys Trp Arg Pro Glu Pro Cys Ala Phe Gly
                565                        570                        575
Ser Lys Gly Ala Glu Met His Tyr Pro Pro Ser Val Arg Tyr Ser Ser
                580                        585                        590
Asn Asp Gly Lys Tyr Asn Gly Ala Cys Ser Glu Asn Leu Val Ser Asp
                595                        600                        605
Phe Phe Glu His Arg Asn Ile Ala Val Leu Asn Arg Tyr Cys Arg Tyr
    610                        615                        620
Phe Tyr Lys Gln Arg Ser Thr Ser Arg Ser Arg Tyr Pro Arg Lys Phe
625                        630                        635                        640
Arg Tyr Cys Pro Leu Ile Lys Lys His Phe Tyr Ile Pro Ala Asp Thr
                645                        650                        655
Asp Asp Val Asp Glu Asn Gly Gln Pro Phe Phe His Ser Pro Glu His
                660                        665                        670
Tyr Ile Lys Glu Gln Glu Lys Ile Asp Ala Glu Lys Ala Ala Lys Gly
    675                        680                        685
Ile Glu Asn Thr Gly Pro Ser Thr Ser Gly Ser Ser Ala Pro Gly Thr
    690                        695                        700
Ile Lys Lys Thr Glu Ala Ser Gln Ser Asp Lys Val Lys Pro Ala Thr
705                        710                        715                        720
Glu Asp Glu Leu Pro Pro Ala Arg Leu Pro Asp Asn Val Arg Arg Phe
                725                        730                        735
Pro Val Val Gly Val Asp Phe Glu Asn Pro Glu Glu Glu Ser Cys Glu
                740                        745                        750
His Lys Thr Val Glu Ser Ile Ala Gly Phe Glu Pro Leu Glu His Leu
    755                        760                        765
Phe His Glu Ser Tyr His Pro Asn Thr Ala Gly Asn Met Leu Arg Gln
    770                        775                        780
Asp Tyr His Thr Asp Ser Glu Val Lys Ile Ala Glu Gln Glu Ala Lys
785                        790                        795                        800
Ala Phe Val Asp Gln Leu Leu Asn Gly Gln Gly Val Leu Gln Glu Phe
                805                        810                        815
Met Lys Gln Phe Lys Val Pro Ser Asp Asn Ser Phe Ala Asp Tyr Val
    820                        825                        830
Thr Gly Gln Ala Glu Val Phe Lys Ala Gln Ile Ala Leu Leu Glu Gln
    835                        840                        845
Ser Glu Asp Phe Gln Arg Val Gln Ala Asn Ala Glu Glu Val Asp Leu
    850                        855                        860
Glu His Thr Leu Gly Glu Ala Phe Glu Arg Phe Gly His Val Val Glu
865                        870                        875                        880
Glu Ser Asn Gly Ser Ser Lys Asn Pro Lys Ala Leu Lys Thr Arg Glu
                885                        890                        895
Gln Met Val Lys Glu Thr Gly Lys Asp Thr Gln Lys Thr Arg Asn His
                900                        905                        910
Val Leu Leu His Leu Glu Ala Asn His Arg Val Gln Ile Glu Arg Arg
    915                        920                        925
Glu Thr Cys Pro Glu Leu His Pro Glu Asp Lys Ile Pro Arg Ile Ala
    930                        935                        940
His Phe Ser Glu Asn Ser Phe Ser Asp Ser Asn Phe Asp Gln Ala Ile
945                        950                        955                        960
Tyr Leu
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<210> 311
<211> 3304
<212> DNA
<213> Caenorhabditis elegans

<400> 311
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ttccaggtac atctactaac ccccaatggt tactcctcct ccagatgtgc caagcacatc      60
gaccaggtcg atggctcgtg accttcaaga gaatccaaac cgacaacctg gtgaaccacg     120
tgtgtctgaa ccgtatcaca attcaatcgt cgagcggatt cgccatattt ttcggacggc     180
tgtatcttcc aatcgttgtc gcaccgagta ccaaaatatc gacctagatt gtgcatatat     240
cacagaccga atcatagcta tcggttatcc agcaacagga atcgaagcga atttccgtaa     300
ctcaaaagtt caaactcaac aatttctgac caggcggcac ggaaagggca acgtgaaggt     360
gtttaacctg cgcggtggat actactacga tgcggataac ttcgatggaa atgttatttg     420
cttcgatatg actgatcatc atccgccgag tctcgaatta atggctccgt tttgcagaga     480
ggctaaggaa tggcttgaag cagacgataa acatgtaata gctgtacact gtaaagctgg     540
aaaaggccgt accggagtga tgatatgtgc tcttctcatc tacatcaact tctatccgag     600
cccacgacaa attctcgact actactcaat aattcgtaca aaaaacaaca aaggtgtcac     660
aattccatca caacgacgct acatttacta ctaccataag cttcgtgaac gtgagctcaa     720
ctatttacca ttgagaatgc agttgattgg tgtctacgtg gaacggcctc caaagacatg     780
gggtggtggt tcaaagataa aagtggaggt tggaaatggc tcgacaattt tatttaagcc     840
ggatcctctc ataatctcca aatcaaatca tcagcgagag cgtgcgacgt ggctgaacaa     900
ctgtgatacg cctaacgaat tcgacaccgg agagcaaaaa tatcatggat ttgtttccaa     960
gagagcatac tgtttttatgg tgccagaaga tgctccagta tttgtcgaag gagatgttcg    1020
tatagacatt cgcgaaatcg gatttctcaa aaagttttcg gacgggaaga ttggtcatgt    1080
ttggttcaat acaatgttcg catgtgatgg aggactcaac ggtggacatt cgagtacgt    1140
agacaaaact cagccgtaca tcggagacga tacatcaatc ggacggaaaa atggaatgcg    1200
aagaaatgaa acgccgatgc gaaaaattga tccagaaact ggaaatgaat ttgagtctcc    1260
gtggcaaata gtgaatcctc ctggactgga aaaacatatt acggaggaac aagcaatgga    1320
aaattatacc aattatggca tgattcctcc tcgatacacg atcagcaaga ttcttcacga    1380
aaagcatgaa aaaggtatcg tcaaggatga ctataatgat cgtaagctgc caatgggaga    1440
caaatcatac acggaatcag gaaaaagtgg agatattcga ggagtcggtg gtccatttga    1500
gataccatat aaagctgagg aacatgttct cacatttcca gtttatgaaa tggatcgagc    1560
attgaagagt aaagatctta caacggaat gaaacttcac gttgttcttc gttgtgtaga    1620
tactcgtgat tcaaaaatga tggaaaagag cgaagtgttc ggcaatctgg cattccataa    1680
tgaatcgaca cggaggcttc aagcgttgac tcaaatgaat ccaaaatggc gacctgaacc    1740
gtgtgcgttc ggatccaaag gtgctgaaat gcattaccct ccgtcggttc gatattcaag    1800
caatgatgga aagtataatg gagcctgcag tgagaacctt gttagcgatt ttttcgagca    1860
cagaaatatt gccgttctta atcgatattg ccgatatttc tacaagcaac gcagtacatc    1920
tcgaagccgt tatccaagaa aattcagata ctgtcctctg atcaagaaac atttctacat    1980
tccagctgat accgatgatg ttgatgaaaa tgggcaaccg ttcttccact caccagagca    2040
ttacattaaa gaacaggaaa aaatagacgc agagaaagca gctaaaggaa ttgaaaatac    2100
tggacccagt acttcaggat caagtgctcc cggaactatc aagaaaacgg aagcttcaca    2160
atccgacaag gtgaagccgg caactgaaga cgaacttcct cctgcgaggc taccggataa    2220
tgtgcgaaga tttccagtcg tcggcgttga tttcgaaaat ccggaagaag aatcgtgtga    2280
acacaaaacc gtagagtcaa tagctggttt tgaaccactc gaacatctat tccatgaatc    2340
ataccatcca aatacggccg gtaacatgct gcgtcaggat tatcacactg attcggaagt    2400
gaaaatagct gaacaagagg caaaagcctt cgttgaccag ttgcttaatg gacaaggtgt    2460
attacaagag tttatgaagc aattcaaagt accatcggac aattcctttg ctgattatgt    2520
aaccggacag gccgaagttt ttaaagcaca gattgcgtta ctggagcagt cggaggattt    2580
tcaacgagtt caagcgaatg cagaggaagt cgatcttgaa cacactcttg gtgaagcgtt    2640
tgagcgattc gggcacgttg tagaagaatc gaatggttct tctaaaaatc caaaagccct    2700
gaaaactcga gaacaaatgg tgaaagaaac tggcaaagac actcagaaga cccgcaatca    2760
tgtgcttcta catttggaag ctaatcatcg tgtgcaaatc gagcgtcgtg aaacgtgccc    2820
ggagctacat ccagaggata aaatcccaag aattgctcat ttttccgaaa acagcttctc    2880
ggattcgaat tttgatcaag ctatttattt gtaaacctaa aacaaaactt ttagaagatt    2940
ttcttcttac tgaccctcca attttcagat aatttcaatg ttttaagttt tctcttcaaa    3000
gtatcattca ctttctgtat agtgtttttgt tttttaacaa actattgttc gattattttg    3060
tatattcata ttatagctct caacttcccg attttccacg tatatatgta tattttgccg    3120
ggtgaaaaat agcaattccc tatgaatgta tccccttcca tctgtttttct tactcagaaa    3180
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ttgtaattca cattgcgggt catcactaat cctatgggct ttaacacaat tctcccataa    3240
attaattgta cttaccaatt ttttgtttaa ttatttagat ttgtaacatt gaaattggtg    3300
ataa                                                                 3304


<210> 312
<211> 1642
<212> DNA
<213> Caenorhabditis elegans

<400> 312
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gatggcatcc gcaatgaagt ttcaatacta ctcgaagaaa gctgctggaa agacaatgtc     120
taatagtgtc tccatgtcca gtgacaatcg catggaggat tttaaacgtc gttttcgtcg     180
aagtggatcg ttaggaattc catttgtccc agaagaagat gttaaacaac tcttcacacc     240
aactcgtact gttcgtcgag aagcatctat tcgcgaaggg gatgaggaag aaggagtaca     300
aattctcaca ataattgtca agtcaagtcg tgtttcggag gatatctcaa aaatgattgc     360
aaacctccct gatcacactc gtatcaaaca tttggagact cgtgacagtc aagatggaag     420
ttccaaaact atggatgttc ttctagagat tgagctcttt cattatggaa aacaagaagc     480
aatggatctt atgagactta atgggcttga tgttcatgag gtgtcatcga ctattcgtcc     540
aactgcaata aaagagcaat atacagagcc tggatctgat gatgcgacaa ccggttctga     600
atggtttcca aaaagtattt atgatttgga tatttgtgca aaaagagtga ttatgtatgg     660
agcagggctg gacgctgatc atcctggttt caaagatacc gagtatcgtc aacgtcgaat     720
gatgtttgct gaactggcgc tcaattacaa acacggtgag ccaattccgc gaaccgaata     780
tacatcatcc gaacggaaaa cttggggaat tatatataga aaattgagag aattgcacaa     840
aaagcacgca tgcaagcagt ttcttgataa ctttgagcta ctggagagac attgtggata     900
ctcggaaaat aatattccgc aactagaaga tatctgcaag tttttgaaag caaaaactgg     960
attccgtgtt cgcccagtcg ccggatactt atcagctcgt gatttcttgg caggtcttgc    1020
atatcgtgtc ttcttctgca ctcaatacgt tcgccatcat gccgatccat tttacactcc    1080
agaaccagac accgttcacg agctcatggg tcacatggct ctattcgctg atccagattt    1140
tgctcagttt tctcaagaga ttggattagc ttctcttgga gcatcagagg aagatttgaa    1200
gaagcttgca acactctact tcttttccat tgaatttggt ctctcgtctg atgacgctgc    1260
cgattctcca gtaaaagaaa tggatcaaa tcatgaaaga tttaaagtat acggagcagg    1320
acttctgagc agtgctggcg agttgcaaca tgccgttgag ggtagtgcaa ccattattcg    1380
ttttgatccg gatcgtgttg ttgagcaaga atgtctcatt actactttcc agtcagcgta    1440
tttctatact agaaattttg aagaggccca gcagaaactc agaatgttca ccaacaacat    1500
gaaacgtccc ttcattgttc gttacaaccc atacacagaa agcgtcgaag ttctcaacaa    1560
ctcccgttcc attatgttgg cagtgaactc tctccgctca gacatcaacc tgctcgccgg    1620
agctctccac tacatcctgt ag                                            1642

<210> 313
<211> 532
<212> PRT
<213> Caenorhabditis elegans

<400> 313
Met Asp Ser Leu Phe Gln Met Ala Ser Ala Met Lys Phe Gln Tyr Tyr
 1               5                  10                  15
Ser Lys Lys Ala Ala Gly Lys Thr Met Ser Asn Ser Val Ser Met Ser
            20                  25                  30
Ser Asp Asn Arg Met Glu Asp Phe Lys Arg Arg Phe Arg Arg Ser Gly
        35                  40                  45
Ser Leu Gly Ile Pro Phe Val Pro Glu Glu Asp Val Lys Gln Leu Phe
    50                  55                  60
Thr Pro Thr Arg Thr Val Arg Arg Glu Ala Ser Ile Arg Glu Gly Asp
65                  70                  75                  80
Glu Glu Glu Gly Val Gln Ile Leu Thr Ile Ile Val Lys Ser Ser Arg
                85                  90                  95
Val Ser Glu Asp Ile Ser Lys Met Ile Ala Asn Leu Pro Asp His Thr
            100                 105                 110
```

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Arg Ile Lys His Leu Glu Thr Arg Asp Ser Gln Asp Gly Ser Ser Lys
        115                 120                 125
Thr Met Asp Val Leu Leu Glu Ile Glu Leu Phe His Tyr Gly Lys Gln
        130                 135                 140
Glu Ala Met Asp Leu Met Arg Leu Asn Gly Leu Asp Val His Glu Val
145                 150                 155                 160
Ser Ser Thr Ile Arg Pro Thr Ala Ile Lys Glu Gln Tyr Thr Glu Pro
                165                 170                 175
Gly Ser Asp Asp Ala Thr Thr Gly Ser Glu Trp Phe Pro Lys Ser Ile
                180                 185                 190
Tyr Asp Leu Asp Ile Cys Ala Lys Arg Val Ile Met Tyr Gly Ala Gly
        195                 200                 205
Leu Asp Ala Asp His Pro Gly Phe Lys Asp Thr Glu Tyr Arg Gln Arg
        210                 215                 220
Arg Met Met Phe Ala Glu Leu Ala Leu Asn Tyr Lys His Gly Glu Pro
225                 230                 235                 240
Ile Pro Arg Thr Glu Tyr Thr Ser Ser Glu Arg Lys Thr Trp Gly Ile
                245                 250                 255
Ile Tyr Arg Lys Leu Arg Glu Leu His Lys Lys His Ala Cys Lys Gln
                260                 265                 270
Phe Leu Asp Asn Phe Glu Leu Leu Glu Arg His Cys Gly Tyr Ser Glu
        275                 280                 285
Asn Asn Ile Pro Gln Leu Glu Asp Ile Cys Lys Phe Leu Lys Ala Lys
        290                 295                 300
Thr Gly Phe Arg Val Arg Pro Val Ala Gly Tyr Leu Ser Ala Arg Asp
305                 310                 315                 320
Phe Leu Ala Gly Leu Ala Tyr Arg Val Phe Phe Cys Thr Gln Tyr Val
                325                 330                 335
Arg His His Ala Asp Pro Phe Tyr Thr Pro Glu Pro Asp Thr Val His
                340                 345                 350
Glu Leu Met Gly His Met Ala Leu Phe Ala Asp Pro Asp Phe Ala Gln
        355                 360                 365
Phe Ser Gln Glu Ile Gly Leu Ala Ser Leu Gly Ala Ser Glu Glu Asp
        370                 375                 380
Leu Lys Lys Leu Ala Thr Leu Tyr Phe Phe Ser Ile Glu Phe Gly Leu
385                 390                 395                 400
Ser Ser Asp Asp Ala Ala Asp Ser Pro Val Lys Glu Asn Gly Ser Asn
                405                 410                 415
His Glu Arg Phe Lys Val Tyr Gly Ala Gly Leu Leu Ser Ser Ala Gly
                420                 425                 430
Glu Leu Gln His Ala Val Glu Gly Ser Ala Thr Ile Ile Arg Phe Asp
        435                 440                 445
Pro Asp Arg Val Val Glu Gln Glu Cys Leu Ile Thr Thr Phe Gln Ser
450                 455                 460
Ala Tyr Phe Tyr Thr Arg Asn Phe Glu Glu Ala Gln Gln Lys Leu Arg
465                 470                 475                 480
Met Phe Thr Asn Asn Met Lys Arg Pro Phe Ile Val Arg Tyr Asn Pro
                485                 490                 495
Tyr Thr Glu Ser Val Glu Val Leu Asn Asn Ser Arg Ser Ile Met Leu
                500                 505                 510
Ala Val Asn Ser Leu Arg Ser Asp Ile Asn Leu Leu Ala Gly Ala Leu
        515                 520                 525
His Tyr Ile Leu
        530


<210> 314
<211> 817
<212> DNA

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<213> Caenorhabditis elegans

<400> 314
attacccaag tttgaggtag cattgctctc ttcaatcata tggattcgtt gtttcagatg   60
gcatccgcaa tgaagtttca atactactcg aagaaagctg ctggaaagac aatgtctaat   120
agtgtcaaaa actggattcc gtgttcgccc agtcgccgga tacttatcag ctcgtgattt   180
cttggcaggt cttgcatatc gtgtcttctt ctgcactcaa tacgttcgcc atcatgccga   240
tccattttac actccagaac cagacaccgt tcacgagctc atgggtcaca tggctctatt   300
cgctgatcca gattttgctc agttttctca agagattgga ttagcttctc ttggagcatc   360
agaggaagat ttgaagaagc ttgcaacact ctacttcttt tccattgaat ttggtctctc   420
gtctgatgac gctgccgatt ctccagtaaa agaaaatgga tcaaatcatg aaagatttaa   480
agtatacgga gcaggacttc tgagcagtgc tggcgagttg caacatgccg ttgagggtag   540
tgcaaccatt attcgttttg atccggatcg tgttgttgag caagaatgtc tcattactac   600
tttccagtca gcgtatttct atactagaaa ttttgaagag gcccagcaga aactcagaat   660
gttcaccaac aacatgaaac gtcccttcat tgttcgttac aacccataca cagaaagcgt   720
cgaagttctc aacaactccc gttccattat gttggcagtg aactctctcc gctcagacat   780
caacctgctc gccggagctc tccactacat cctgtag   817

<210> 315
<211> 45
<212> PRT
<213> Caenorhabditis elegans

<400> 315
Met Asp Ser Leu Phe Gln Met Ala Ser Ala Met Lys Phe Gln Tyr Tyr
1   5   10   15
Ser Lys Lys Ala Ala Gly Lys Thr Met Ser Asn Ser Val Lys Asn Trp
            20   25   30
Ile Pro Cys Ser Pro Ser Arg Arg Ile Leu Ile Ser Ser
        35   40   45

<210> 316
<211> 466
<212> DNA
<213> Caenorhabditis elegans

<400> 316
attcggcatg agcatggagc ttcgagtcct agagaacaca aaacgttccc ggcggaacct   60
gggtctggac tgcgacgaga ctcaagcgag tcccgctgct gccgatatcc cctcacagtg   120
gactttgagg ctttcggctg ggactggatc atcgcaccta agcgctacaa ggccaactac   180
tgctccggcc agtgggagta catgttcatg caaaaatatc cgcatcccca tttggtgcag   240
caggccaatc aagaggtta tgctgggccc tgttgtaccc ccaccaagat gtccccaatc   300
aacatgctct acttcaatga caagcagcag attatctacg caagatccc tggcatggtg   360
gtggatcgct gtggctgctc ttaaggtggg ggatagagga tgcctccccc acagaccgta   420
ccccaagacc catagccctg cccaatccac cgcctgatcc aaacat   466

<210> 317
<211> 128
<212> PRT
<213> Caenorhabditis elegans

<400> 317
Ile Arg His Glu His Gly Ala Ser Ser Pro Arg Glu His Lys Thr Phe
1   5   10   15
Pro Ala Glu Pro Gly Ser Gly Leu Arg Arg Asp Ser Ser Glu Ser Arg
            20   25   30
Cys Cys Arg Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp
        35   40   45

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```
Trp Ile Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Gln
    50                  55                  60
Trp Glu Tyr Met Phe Met Gln Lys Tyr Pro His Thr His Leu Val Gln
65                  70                  75                  80
Gln Ala Asn Pro Arg Gly Tyr Ala Gly Pro Cys Cys Thr Pro Thr Lys
                85                  90                  95
Met Ser Pro Ile Asn Met Leu Tyr Phe Asn Asp Lys Gln Gln Ile Ile
            100                 105                 110
Tyr Gly Lys Ile Pro Leu Ala Met Val Val Asp Arg Cys Gly Cys Ser
        115                 120                 125
```

<210> 318
<211> 8
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 6
<223> n = c or t

<400> 318
caaaanaa   8

<210> 319
<211> 20
<212> DNA
<213> Caenorhabditis elegans

<400> 319
ccactatggc cgagatttcc   20

<210> 320
<211> 44
<212> DNA
<213> Caenorhabditis elegans

<400> 320
ccagtgaaaa gttcttctcc tttcttcctc ttctcgaatt cgga   44

<210> 321
<211> 21
<212> DNA
<213> Caenorhabditis elegans

<400> 321
cttcctcttc tcgaattcgg c   21

<210> 322
<211> 8
<212> PRT
<213> Caenorhabditis elegans

<400> 322
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Gly Arg Lys Gly Phe Pro His Val
 1               5
```

<210> 323
<211> 7
<212> PRT
<213> Caenorhabditis elegans

<220>
<221> VARIANT
<222> (1)...(7)
<223> Xaa = Any Amino Acid

<400> 323
Arg Xaa Xaa Ile Xaa Xaa Gly
 1   5

<210> 324
<211> 7
<212> PRT
<213> Caenorhabditis elegans or Homo sapiens

<400> 324
Cys Gly Cys Cys Cys Cys Cys
 1   5

<210> 325
<211> 79
<212> PRT
<213> Homo sapiens or Caenorhabditis elegans

<400> 325
Val Leu Asp Asp Tyr Gly Arg Val Asp Trp Trp Gly Gly Val Val Met
 1   5   10   15
Tyr Glu Met Met Cys Gly Arg Leu Pro Phe Tyr Asp His Lys Leu Phe
            20   25   30
Glu Leu Ile Arg Phe Pro Leu Glu Ala Leu Leu Gly Leu Leu Lys Asp
        35   40   45
Pro Thr Gln Arg Leu Gly Gly Gly Glu Asp Ala Glu Ile Phe Phe Trp
    50   55   60
Tyr Lys Pro Pro Lys Pro Val Ser Glu Thr Asp Thr Tyr Phe Asp
65   70   75

<210> 326
<211> 48
<212> PRT
<213> Homo sapiens or Caenorhabditis elegans

<400> 326
Thr Met Phe Leu Lys Leu Gly Lys Gly Thr Phe Gly Lys Val Ile Leu
 1   5   10   15
Lys Glu Lys Thr Tyr Ala Lys Ile Leu Lys Lys Val Ile Ala Glu Val
            20   25   30
Ala His Thr Leu Thr Glu Asn Arg Val Leu Gln His Pro Phe Leu Thr
        35   40   45

<210> 327
<211> 27

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<212> DNA
<213> Caenorhabditis elegans

<400> 327
caagcgttga ctcaaatgaa tccaaaa   27

<210> 328
<211> 55
<212> DNA
<213> Caenorhabditis elegans

<400> 328
caagcgttga ctcaatgcgt tgactcaatg cgttgactcg ttgacgaatc caaaa   55

<210> 329
<211> 530
<212> PRT
<213> C. elegans

<400> 329
Met Asn Asp Ser Ile Asp Asp Asp Phe Pro Pro Glu Pro Arg Gly Arg
 1   5   10   15
Cys Tyr Thr Trp Pro Met Gln Gln Tyr Ile Tyr Gln Glu Ser Ser Ala
            20   25   30
Thr Ile Pro His His His Leu Asn Gln His Asn Asn Pro Tyr His Pro
        35   40   45
Met His Pro His His Gln Leu Pro His Met Gln Gln Leu Pro Gln Pro
    50   55   60
Leu Leu Asn Leu Asn Met Thr Thr Leu Thr Ser Ser Gly Ser Ser Val
65   70   75   80
Ala Ser Ser Ile Gly Gly Gly Ala Gln Cys Ser Pro Cys Ala Ser Gly
            85   90   95
Ser Ser Thr Ala Ala Thr Asn Ser Ser Gln Gln Gln Gln Thr Val Gly
            100   105   110
Gln Met Leu Ala Ala Ser Val Pro Cys Ser Ser Ser Gly Met Thr Leu
            115   120   125
Gly Met Ser Leu Asn Leu Ser Gln Gly Gly Gly Pro Met Pro Ala Lys
            130   135   140
Lys Lys Arg Cys Arg Lys Lys Pro Thr Asp Gln Leu Ala Gln Lys Lys
145   150   155   160
Pro Asn Pro Trp Gly Glu Glu Ser Tyr Ser Asp Ile Ile Ala Lys Ala
            165   170   175
Leu Glu Ser Ala Pro Asp Gly Arg Leu Lys Leu Asn Glu Ile Tyr Gln
            180   185   190
Trp Phe Ser Asp Asn Ile Pro Tyr Phe Gly Glu Arg Ser Ser Pro Glu
            195   200   205
Glu Ala Ala Gly Trp Lys Asn Ser Ile Arg His Asn Leu Ser Leu His
    210   215   220
Ser Arg Phe Met Arg Ile Gln Asn Glu Gly Ala Gly Lys Ser Ser Trp
225   230   235   240
Trp Val Ile Asn Pro Asp Ala Lys Pro Gly Arg Asn Pro Arg Arg Thr
                245   250   255
Arg Glu Arg Ser Asn Thr Ile Glu Thr Thr Thr Lys Ala Gln Leu Glu
            260   265   270
Lys Ser Arg Arg Gly Ala Lys Lys Arg Ile Lys Glu Arg Ala Leu Met
            275   280   285
Gly Ser Leu His Ser Thr Leu Asn Gly Asn Ser Ile Ala Gly Ser Ile
            290   295   300
Gln Thr Ile Ser His Asp Leu Tyr Asp Asp Asp Ser Met Gln Gly Ala

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```
      305                     310                     315                     320
Phe Asp Asn Val Pro Ser Ser Phe Arg Pro Arg Thr Gln Ser Asn Leu
                    325                     330                     335
Ser Ile Pro Gly Ser Ser Ser Arg Val Ser Pro Ala Ile Gly Ser Asp
                340                     345                     350
Ile Tyr Asp Asp Leu Glu Phe Pro Ser Trp Val Gly Glu Ser Val Pro
                355                     360                     365
Ala Ile Pro Ser Asp Ile Val Asp Arg Thr Asp Gln Met Arg Ile Asp
            370                     375                     380
Ala Thr Thr His Ile Gly Gly Val Gln Ile Lys Gln Glu Ser Lys Pro
385                     390                     395                     400
Ile Lys Thr Glu Pro Ile Ala Pro Pro Pro Ser Tyr His Glu Leu Asn
                    405                     410                     415
Ser Val Arg Gly Ser Cys Ala Gln Asn Pro Leu Leu Arg Asn Pro Ile
                420                     425                     430
Val Pro Ser Thr Asn Phe Lys Pro Met Pro Leu Pro Gly Ala Tyr Gly
                435                     440                     445
Asn Tyr Gln Asn Gly Gly Ile Thr Pro Ile Asn Trp Leu Ser Thr Ser
                450                     455                     460
Asn Ser Ser Pro Leu Pro Gly Ile Gln Ser Cys Gly Ile Val Ala Ala
465                     470                     475                     480
Gln His Thr Val Ala Ser Ser Ser Ala Leu Pro Ile Asp Leu Glu Asn
                    485                     490                     495
Leu Thr Leu Pro Asp Gln Pro Leu Met Asp Thr Met Asp Val Asp Ala
                500                     505                     510
Leu Ile Arg His Glu Leu Ser Gln Ala Gly Gly Gln His Ile His Phe
            515                     520                     525
Asp Leu
        530


<210> 330   ・
<211> 673
<212> PRT
<213> Homo sapiens

<400> 330
Met Ala Glu Ala Pro Ala Ser Pro Ala Pro Leu Ser Pro Leu Glu Val
  1                 5                      10                      15
Glu Leu Asp Pro Glu Phe Glu Pro Gln Ser Arg Pro Arg Ser Cys Thr
                20                      25                      30
Trp Pro Leu Gln Arg Pro Glu Leu Gln Ala Ser Pro Ala Lys Pro Ser
            35                      40                      45
Gly Glu Thr Ala Ala Asp Ser Met Ile Pro Glu Glu Glu Asp Asp Glu
        50                      55                      60
Asp Asp Glu Asp Gly Gly Gly Arg Ala Gly Ser Ala Met Ala Ile Gly
65                      70                      75                      80
Gly Gly Gly Gly Ser Gly Thr Leu Gly Ser Gly Leu Leu Leu Glu Asp
                    85                      90                      95
Ser Ala Arg Val Leu Ala Pro Gly Gly Gln Asp Pro Gly Ser Gly Pro
                100                     105                     110
Ala Thr Ala Ala Gly Gly Leu Ser Gly Gly Thr Gln Ala Leu Leu Gln
            115                     120                     125
Pro Gln Gln Pro Leu Pro Pro Pro Gln Pro Gly Ala Ala Gly Gly Ser
        130                     135                     140
Gly Gln Pro Arg Lys Cys Ser Ser Arg Arg Asn Ala Trp Gly Asn Leu
145                     150                     155                     160
Ser Tyr Ala Asp Leu Ile Thr Arg Ala Ile Glu Ser Ser Pro Asp Lys
                    165                     170                     175
```

Arg Leu Thr Leu Ser Gln Ile Tyr Glu Trp Met Val Arg Cys Val Pro
            180   185   190
Tyr Phe Lys Asp Lys Gly Asp Ser Asn Ser Ser Ala Gly Trp Lys Asn
            195   200   205
Ser Ile Arg His Asn Leu Ser Leu His Ser Arg Phe Met Arg Val Gln
            210   215   220
Asn Glu Gly Thr Gly Lys Ser Ser Trp Trp Ile Ile Asn Pro Asp Gly
225   230   235   240
Gly Lys Ser Gly Lys Ala Pro Arg Arg Arg Ala Val Ser Met Asp Asn
                        245   250   255
Ser Asn Lys Tyr Thr Lys Ser Arg Gly Arg Ala Ala Lys Lys Lys Ala
            260   265   270
Ala Leu Gln Thr Ala Pro Glu Ser Ala Asp Asp Ser Pro Ser Gln Leu
            275   280   285
Ser Lys Trp Pro Gly Ser Pro Thr Ser Arg Ser Ser Asp Glu Leu Asp
            290   295   300
Ala Trp Thr Asp Phe Arg Ser Arg Thr Asn Ser Asn Ala Ser Thr Val
305   310   315   320
Ser Gly Arg Leu Ser Pro Ile Met Ala Ser Thr Glu Leu Asp Glu Val
                        325   330   335
Gln Asp Asp Asp Ala Pro Leu Ser Pro Met Leu Tyr Ser Ser Ser Ala
            340   345   350
Ser Leu Ser Pro Ser Val Ser Lys Pro Cys Thr Val Glu Leu Pro Arg
            355   360   365
Leu Thr Asp Met Ala Gly Thr Met Asn Leu Asn Asp Gly Leu Thr Glu
            370   375   380
Asn Leu Met Asp Asp Leu Leu Asp Asn Ile Thr Leu Pro Pro Ser Gln
385   390   395   400
Pro Ser Pro Thr Gly Gly Leu Met Gln Arg Ser Ser Ser Phe Pro Tyr
                        405   410   415
Thr Thr Lys Gly Ser Gly Leu Gly Ser Pro Thr Ser Ser Phe Asn Ser
                        420   425   430
Thr Val Phe Gly Pro Ser Ser Leu Asn Ser Leu Arg Gln Ser Pro Met
            435   440   445
Gln Thr Ile Gln Glu Asn Lys Pro Ala Thr Phe Ser Ser Met Ser His
            450   455   460
Tyr Gly Asn Gln Thr Leu Gln Asp Leu Leu Thr Ser Asp Ser Leu Ser
465   470   475   480
His Ser Asp Val Met Met Thr Gln Ser Asp Pro Leu Met Ser Gln Ala
                        485   490   495
Ser Thr Ala Val Ser Ala Gln Asn Ser Arg Arg Asn Val Met Leu Arg
            500   505   510
Asn Asp Pro Met Met Ser Phe Ala Ala Gln Pro Asn Gln Gly Ser Leu
            515   520   525
Val Asn Gln Asn Leu Leu His His Gln His Gln Thr Gln Gly Ala Leu
            530   535   540
Gly Gly Ser Arg Ala Leu Ser Asn Ser Val Ser Asn Met Gly Leu Ser
545   550   555   560
Glu Ser Ser Ser Leu Gly Ser Ala Lys His Gln Gln Gln Ser Pro Val
                        565   570   575
Ser Gln Ser Met Gln Thr Leu Ser Asp Ser Leu Ser Gly Ser Ser Leu
            580   585   590
Tyr Ser Thr Ser Ala Asn Leu Pro Val Met Gly His Glu Lys Phe Pro
            595   600   605
Ser Asp Leu Asp Leu Asp Met Phe Asn Gly Ser Leu Glu Cys Asp Met
            610   615   620
Glu Ser Ile Ile Arg Ser Glu Leu Met Asp Ala Asp Gly Leu Asp Phe
625   630   635   640
Asn Phe Asp Ser Leu Ile Ser Thr Gln Asn Val Val Gly Leu Asn Val

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                        645                      650                      655
Gly Asn Phe Thr Gly Ala Lys Gln Ala Ser Ser Gln Ser Trp Val Pro
                        660                      665                      670
Gly


<210> 331
<211> 501
<212> PRT
<213> Homo sapiens

<400> 331
Met Arg Ile Gln Pro Gln Lys Ala Ala Ala Ile Ile Asp Leu Asp Pro
 1               5                       10                      15
Asp Phe Glu Pro Gln Ser Arg Pro Arg Ser Cys Thr Trp Pro Leu Pro
                20                      25                      30
Arg Pro Glu Ile Ala Asn Gln Pro Ser Glu Pro Pro Glu Val Glu Pro
            35                      40                      45
Asp Leu Gly Glu Lys Val His Thr Glu Gly Arg Ser Glu Pro Ile Leu
        50                      55                      60
Leu Pro Ser Arg Leu Ser Glu Pro Ala Gly Gly Pro Gln Pro Gly Ile
65                      70                      75                      80
Leu Gly Ala Val Thr Gly Pro Arg Lys Gly Gly Ser Arg Arg Asn Ala
                85                      90                      95
Trp Gly Asn Gln Ser Tyr Ala Glu Phe Ile Ser Gln Ala Ile Glu Ser
            100                     105                     110
Ala Pro Glu Lys Arg Leu Thr Leu Ala Gln Ile Tyr Glu Trp Met Val
        115                     120                     125
Arg Thr Val Pro Tyr Phe Lys Asp Lys Gly Asp Ser Asn Ser Ser Ala
        130                     135                     140
Gly Trp Lys Asn Ser Ile Arg His Asn Leu Ser Leu His Ser Lys Phe
145                     150                     155                     160
Ile Lys Val His Asn Glu Ala Thr Gly Lys Ser Ser Trp Trp Met Leu
                165                     170                     175
Asn Pro Glu Gly Gly Lys Ser Gly Lys Ala Pro Arg Arg Arg Ala Ala
            180                     185                     190
Ser Met Asp Ser Ser Ser Lys Leu Leu Arg Gly Arg Ser Lys Ala Pro
        195                     200                     205
Lys Lys Lys Pro Ser Val Leu Pro Ala Pro Pro Glu Gly Ala Thr Pro
        210                     215                     220
Thr Ser Pro Val Gly His Phe Ala Lys Trp Ser Gly Ser Pro Cys Ser
225                     230                     235                     240
Arg Asn Arg Glu Glu Ala Asp Met Trp Thr Thr Phe Arg Pro Arg Ser
                245                     250                     255
Ser Ser Asn Ala Ser Ser Val Ser Thr Arg Leu Ser Pro Leu Arg Pro
            260                     265                     270
Glu Ser Glu Val Leu Ala Glu Glu Ile Pro Ala Ser Val Ser Ser Tyr
        275                     280                     285
Ala Gly Gly Val Pro Pro Thr Leu Asn Glu Gly Leu Glu Leu Leu Asp
        290                     295                     300
Gly Leu Asn Leu Thr Ser Ser His Ser Leu Leu Ser Arg Ser Gly Leu
305                     310                     315                     320
Ser Gly Phe Ser Leu Gln His Pro Gly Val Thr Gly Pro Leu His Thr
                325                     330                     335
Tyr Ser Ser Ser Leu Phe Ser Pro Ala Glu Gly Pro Leu Ser Ala Gly
            340                     345                     350
Glu Gly Cys Phe Ser Ser Ser Gln Ala Leu Glu Ala Leu Leu Thr Ser
            355                     360                     365
```

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```
Asp Thr Pro Pro Pro Pro Ala Asp Val Leu Met Thr Gln Val Asp Pro
    370                 375                 380
Ile Leu Ser Gln Ala Pro Thr Leu Leu Leu Leu Gly Gly Leu Pro Ser
385                 390                 395                 400
Ser Ser Lys Leu Ala Thr Gly Val Gly Leu Cys Pro Lys Pro Leu Glu
            405                 410                 415
Ala Arg Gly Pro Ser Ser Leu Val Pro Thr Leu Ser Met Ile Ala Pro
            420                 425                 430
Pro Pro Val Met Ala Ser Ala Pro Ile Pro Lys Ala Leu Gly Thr Pro
        435                 440                 445
Val Leu Thr Pro Pro Thr Glu Ala Ala Ser Gln Asp Arg Met Pro Gln
    450                 455                 460
Asp Leu Asp Leu Asp Met Tyr Met Glu Asn Leu Glu Cys Asp Met Asp
465                 470                 475                 480
Asn Ile Ile Ser Asp Leu Met Asp Glu Gly Glu Gly Leu Asp Phe Asn
            485                 490                 495
Phe Glu Pro Asp Pro
            500
```